

§ 22.227

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.

(d) *Audits.* (1) Applicants and licensees claiming eligibility as a small business or consortium of small businesses under §§22.217 through 22.223 shall be subject to audits by the Commission. Selection for audit may be random, on information, or on the basis of other factors.

(2) Consent to such audits is part of the certification included in the short-form application (FCC Form 175). Such consent shall include consent to the audit of the applicant's or licensee's books, documents and other material (including accounting procedures and practices) regardless of form or type, sufficient to confirm that such applicant's or licensee's representations are, and remain, accurate. Such consent shall include inspection at all reasonable times of the facilities, or parts thereof, engaged in providing and transacting business, or keeping records regarding licensed paging service and shall also include consent to the interview of principals, employees, customers and suppliers of the applicant or licensee.

(e) *Definitions.* The terms affiliate, small business, consortium of small businesses, gross revenues, and controlling interest used in this section are defined in §22.223.

[59 FR 59507, Nov. 17, 1994, as amended at 64 FR 33782, June 24, 1999]

§ 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 §§1.2108(b) through 1.2108(d) of this chapter, §22.130, and §90.163.

(b) The consideration that an individual or an entity will be permitted to receive for agreeing to withdraw an application or a petition to deny will be limited by the provisions set forth in §22.129, §90.162, and §1.2105(c) of this chapter.

47 CFR Ch. I (10–1–00 Edition)

Subpart C—Operational and Technical Requirements

OPERATIONAL REQUIREMENTS

§ 22.301 Station inspection.

Upon reasonable request, the licensee of any station authorized in the Public Mobile Services must make the station and station records available for inspection by authorized representatives of the Commission at any reasonable hour.

[59 FR 59955, Nov. 21, 1994]

§ 22.303 Retention of station authorizations; identifying transmitters.

The current authorization for each station, together with current administrative and technical information concerning modifications to facilities pursuant to §22.163 and added facilities pursuant to §22.165 must be retained as a permanent part of the station records. A clearly legible photocopy of the authorization must be available at each regularly attended control point of the station, or in lieu of this photocopy, licensees may instead make available at each regularly attended control point the address or location where the licensee's current authorization and other records may be found. The station call sign must be clearly and legibly marked on or near every transmitting facility, other than mobile transmitters, of the station.

§ 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) Rural subscriber stations using meteor burst propagation mode communications in the Rural Radiotelephone Service;

(4) Stations using Basic Exchange Telephone Radio Systems in the Rural Radiotelephone Service;

(5) Nationwide network paging stations operating on 931 MHz channels; or,

(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 tempo-

rarily 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]

§ 22.317 Discontinuance of station operation.

If the operation of a Public Mobile Services station is permanently discontinued, the licensee shall send authorization for cancellation by electronic filing via the ULS on FCC Form 601. For purposes of this section, any station that has not provided service to subscribers for 90 continuous days is considered to have been permanently discontinued, unless the applicant notified the FCC otherwise prior to the end of the 90 day period and provided a date on which operation will resume, which

§ 22.321

date must not be in excess of 30 additional days.

[59 FR 59507, Nov. 17, 1994, as amended at 61 FR 54099, Oct. 17, 1996; 63 FR 68944, Dec. 14, 1998]

§ 22.321 Equal employment opportunities.

Public Mobile Services licensees shall afford equal opportunity in employment to all qualified persons, and personnel must not be discriminated against in employment because of sex, race, color, religion, or national origin.

(a) *Equal employment opportunity program.* Each licensee shall establish, maintain, and carry out a positive continuing program of specific practices designed to assure equal opportunity in every aspect of employment policy and practice.

(1) Under the terms of its program, each licensee shall:

(i) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance.

(ii) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation.

(iii) Communicate its equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to sex, race, color, religion or national origin, and solicit their recruitment assistance on a continuing basis.

(iv) Conduct a continuing campaign to exclude every form of prejudice or discrimination based upon sex, race, color, religion, or national origin, from the licensee's personnel policies and practices and working conditions.

(v) Conduct a continuing review of job structure and employment practices and adopt positive recruitment, training, job design and other measures needed in order to ensure genuine equality of opportunity to participate fully in all organizational units, occupations and levels of responsibility.

(2) The program must reasonably address specific concerns through policies and actions as set forth in this para-

graph, to the extent that they are appropriate in consideration of licensee size, location and other factors.

(i) *To assure nondiscrimination in recruiting.* (A) Posting notices in the licensee's offices informing applicants for employment of their equal employment rights and their right to notify the Equal Employment Opportunity Commission (EEOC), the Federal Communications Commission (FCC), or other appropriate agency. Where a substantial number of applicants are Spanish-surnamed Americans, such notice should be posted in both Spanish and English.

(B) Placing a notice in bold type on the employment application informing prospective employees that discrimination because of sex, race, color, religion or national origin is prohibited, and that they may notify the EEOC, the FCC or other appropriate agency if they believe they have been discriminated against.

(C) Placing employment advertisements in media which have significant circulation among minority groups in the recruiting area.

(D) Recruiting through schools and colleges with significant minority group enrollments.

(E) Maintaining systematic contacts with minority and human relations organizations, leaders and spokespersons to encourage referral of qualified minority or female applicants.

(F) Encouraging present employees to refer minority or female applicants.

(G) Making known to the appropriate recruitment sources in the employer's immediate area that qualified minority members are being sought for consideration whenever the licensee hires.

(ii) *To assure nondiscrimination in selection and hiring.* (A) Instructing employees of the licensee who make hiring decisions that all applicants for all jobs are to be considered without discrimination.

(B) Where union agreements exist, cooperating with the union or unions in the development of programs to assure qualified minority persons or females of equal opportunity for employment, and including an effective nondiscrimination clause in new or renegotiated union agreements.

(C) Avoiding use of selection techniques or tests that have the effect of discriminating against minority groups or females.

(iii) *To assure nondiscriminatory placement and promotion.* (A) Instructing employees of the licensee who make decisions on placement and promotion that minority employees and females are to be considered without discrimination, and that job areas in which there is little or no minority or female representation should be reviewed to determine whether this results from discrimination.

(B) Giving minority groups and female employees equal opportunity for positions which lead to higher positions. Inquiring as to the interest and skills of all lower-paid employees with respect to any of the higher-paid positions, followed by assistance, counseling, and effective measures to enable employees with interest and potential to qualify themselves for such positions.

(C) Reviewing seniority practices to insure that such practices are non-discriminatory and do not have a discriminatory effect.

(D) Avoiding use of selection techniques or tests that have the effect of discriminating against minority groups or females.

(iv) *To assure nondiscrimination in other areas of employment practices.* (A) Examining rates of pay and fringe benefits for present employees with equivalent duties and adjusting any inequities found.

(B) Providing opportunity to perform overtime work on a basis that does not discriminate against qualified minority groups or female employees.

(b) *EEO statement.* Each licensee having 16 or more full-time employees shall file with the FCC, no later than May 31st following the grant of that licensee's first Public Mobile Services authorization, a statement describing fully its current equal employment opportunity program, indicating specific practices to be followed in order to assure equal employment opportunity on the basis of sex, race, color, religion or national origin in such aspects of employment practices as regards recruitment, selection, training, placement, promotion, pay, working conditions,

demotion, layoff and termination. Any licensee having 16 or more full-time employees that changes its existing equal employment opportunity program shall file with the FCC, no later than May 31st thereafter, a revised statement reflecting the change(s).

NOTE TO PARAGRAPH (B) OF § 22.321: Licensees having 16 or more full-time employees that were granted their first Public Mobile Services authorization prior to January 1, 1995, and do not have a current EEO statement on file with the FCC, must file such statement, required by paragraph (b) of this section, no later than May 31, 1995.

(c) *Report of complaints filed against licensees.* Each licensee, regardless of how many employees it has, shall submit an annual report to the FCC no later than May 31st of each year indicating whether any complaints regarding violations by the licensee or equal employment provisions of Federal, State, Territorial, or local law have been filed before anybody having competent jurisdiction.

(1) The report should state the parties involved, the date filing, the courts or agencies before which the matters have been heard, the appropriate file number (if any), and the respective disposition or current status of any such complaints.

(2) Any licensee who has filed such information with the EEOC may file a notification of such filing with the FCC in lieu of a report.

(d) *Complaints of violations of Equal Employment Programs.* Complaints alleging employment discrimination against a common carrier licensee are considered by the FCC in the following manner:

(1) If a complaint raising an issue of discrimination is received against a licensee who is within the jurisdiction of the EEOC, it is submitted to that agency. The FCC maintains a liaison with that agency that keeps the FCC informed of the disposition of complaints filed against common carrier licensees.

(2) Complaints alleging employment discrimination against a common carrier licensee who does not fall under the jurisdiction of the EEOC but is covered by appropriate enforceable State law, to which penalties apply, may be submitted by the FCC to the respective State agency.

§ 22.323

47 CFR Ch. I (10–1–00 Edition)

(3) Complaints alleging employment discrimination against a common carrier licensee who does not fall under the jurisdiction of the EEOC or an appropriate State law, are accorded appropriate treatment by the FCC.

(4) The FCC will consult with the EEOC on all matters relating to the evaluation and determination of compliance by the common carrier licensees with the principles of equal employment as set forth herein.

(5) Complaints indicating a general pattern of disregard of equal employment practices which are received against a licensee that is required to file an employment report to the FCC under § 1.815(a) of this chapter are investigated by the FCC.

(e) *FCC records.* A copy of every annual employment report, equal employment opportunity program statement, reports on complaints regarding violation of equal employment provisions of Federal, State, Territorial, or local law, and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the licensee and the FCC pertaining to the reports after they have been filed and all documents incorporated therein by reference, are open for public inspection at the offices of the FCC.

(f) *Licensee records.* Each licensee required to file annual employment reports (pursuant to § 1.815(a) of this chapter), equal employment opportunity program statements, and annual reports on complaints regarding violations of equal employment provisions of Federal, State, Territorial, or local law shall maintain for public inspection a file containing a copy of each such report and copies of all exhibits, letters, and other documents filed as part thereto, all correspondence between the licensee and the FCC pertaining to the reports after they have been filed and all documents incorporated therein by reference. The documents must be retained for a period of 2 years.

§ 22.323 **Incidental communication services.**

Carriers authorized to operate stations in the Public Mobile radio services may use these stations to provide

other communications services incidental to the primary public mobile service for which the authorizations were issued, provided that:

(a) The costs and charges of subscribers who do not wish to use incidental services are not increased as a result of provision of incidental services to other subscribers;

(b) The quality of the primary public mobile service does not materially deteriorate as a result of provision of incidental services, and neither growth nor availability of the primary public mobile service is significantly diminished as a result of provision of incidental services; and

(c) The provision of the incidental services is not inconsistent with the Communications Act of 1934, as amended, or with FCC rules and policies.

[59 FR 59507, Nov. 17, 1994, as amended at 63 FR 68944, Dec. 14, 1998; 65 FR 49202, Aug. 11, 2000]

§ 22.325 **Control points.**

Each station in the Public Mobile Services must have at least one control point and a person on duty who is responsible for station operation. This section does not require that the person on duty be at the control point or continuously monitor all transmissions of the station. However, the control point must have facilities that enable the person on duty to turn off the transmitters in the event of a malfunction.

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 common carrier 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.

§ 22.352 Protection from interference.

Public Mobile Service stations operating in accordance with FCC rules that provide technical channel assignment criteria for the radio service and channels involved, all other 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) *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 tropo-

spheric 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]

§ 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

§ 22.355

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 any emission type provided that the resulting emission complies with the appropriate emission mask. See §§ 22.359, 22.861 and 22.917.

[61 FR 54099, Oct. 17, 1996]

47 CFR Ch. I (10-1-00 Edition)

§ 22.359 Emission masks.

Unless otherwise indicated in the rules governing a specific radio service, all transmitters intended for use in the Public Mobile Services must be designed to comply with the emission masks outlined in this section. If an emission outside of the authorized bandwidth causes harmful interference, the FCC may, at its discretion, require greater attenuation than specified in this section.

(a) *Analog modulation.* For transmitters other than those employing digital modulation techniques, the mean or peak envelope power of adjacent channel emissions must be attenuated below the output mean or peak envelope power of the total emission (P, in Watts) in accordance with the following schedule:

(1) On any frequency removed from the center frequency of the assigned channel by more than 50 percent up to and including 100 percent of the authorized bandwidth:

at least 25 dB;

(2) On any frequency removed from the center frequency of the assigned channel by more than 100 percent up to and including 250 percent of the authorized bandwidth:

at least 35 dB;

(3) On any frequency removed from the center frequency of the assigned channel by more than 250 percent of the authorized bandwidth:

at least 43 + 10 log P dB, or 80 dB, whichever is the lesser attenuation.

(b) *Digital modulation.* For transmitters not equipped with an audio low pass filter and for transmitters employing digital modulation techniques, the mean or peak envelope power of sideband emissions must be attenuated below the mean or peak envelope power of the total emission (P, in Watts) in accordance with the following schedule:

(1) For transmitters that operate in the frequency ranges 35 to 44 MHz, 72 to 73 MHz, 75.4 to 76.0 MHz and 152 to 159 MHz,

(i) On any frequency removed from the center frequency of the assigned channel by a displacement frequency f_d

(in kHz) of more than 5 kHz but not more than 10 kHz:

at least $83 \log (f_d+5)$ dB;

(ii) On any frequency removed from the center frequency of the assigned channel by a displacement frequency f_d (in kHz) of more than 10 kHz but not more than 250 percent of the authorized bandwidth:

at least $29 \log f_d+11$ dB or 50 dB, whichever is the lesser attenuation;

(iii) On any frequency removed from the center frequency of the assigned channel by more than 250 percent of the authorized bandwidth:

at least $43 + 10 \log P$ dB, or 80 dB, whichever is the lesser attenuation.

(2) For transmitters that operate in the frequency ranges 450 to 512 MHz and 929 to 932 MHz,

(i) On any frequency removed from the center frequency of the assigned channel by a displacement frequency f_d (in kHz) of more than 5 kHz but not more than 10 kHz:

at least $83 \log (f_d+5)$ dB;

(ii) On any frequency removed from the center frequency of the assigned channel by a displacement frequency f_d (in kHz) of more than 10 kHz but not more than 250 percent of the authorized bandwidth:

at least $116 \log (f_d+6.1)$ dB, or $50 + 10 \log P$ dB, or 70 dB, whichever is the lesser attenuation;

(iii) On any frequency removed from the center frequency of the assigned channel by more than 250 percent of the authorized bandwidth:

at least $43 + 10 \log P$ dB, or 80 dB, whichever is the lesser attenuation.

(c) *Measurement procedure.* Either peak or average power may be used, provided that the same technique is used for both the adjacent channel or sideband emissions and the total emission. The resolution bandwidth of the measuring instrument must be set to 300 Hz for measurements on any frequency removed from the center frequency of the assigned channel by no more than 250 percent of the authorized bandwidth and 30 kHz for measurements on any frequency removed from the center frequency of the assigned

channel by more than 250 percent of the authorized bandwidth.

§ 22.361 Standby facilities.

Licensees of stations in the Public Mobile Services may install standby transmitters for the purpose of continuing service in the event of failure or during required maintenance of regular transmitters without obtaining separate authorization, provided that operation of the standby transmitters would not increase the service areas or interference potential of the stations, and that such standby transmitters use the same antenna as the regular transmitters they temporarily replace.

TABLE C-2.—TECHNICAL REQUIREMENTS FOR DIRECTIONAL ANTENNAS

Frequency range	Maximum beamwidth	Suppression
35 to 512 MHz	80°	10 dB
512 to 1500 MHz	20°	13 dB
1500 to 2500 MHz	12°	13 dB

[59 FR 59507, Nov. 17, 1994; 60 FR 9889, Feb. 22, 1995]

§ 22.363 Directional antennas.

Fixed transmitters for point-to-point operation must use a directional transmitting antenna with the major lobe of radiation in the horizontal plane directed toward the receiving antenna or passive reflector of the station for which the transmissions are intended. Directional antennas used in the Public Mobile Services must meet the technical requirements given in Table C-2 to § 22.361.

(a) Maximum beamwidth is for the major lobe at the half power points.

(b) Suppression is the minimum attenuation for any secondary lobe referenced to the main lobe.

(c) An omnidirectional antenna may be used for fixed transmitters where there are two or more receive locations at different azimuths.

§ 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

§ 22.367

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]

§ 22.367 Wave polarization.

Public mobile station antennas must be of the correct type and properly installed such that the electromagnetic emissions have the polarization required by this section.

(a) *Vertical.* Waves radiated by the following must be vertically polarized:

(1) Base, mobile, dispatch, and auxiliary test transmitters in the Paging and Radiotelephone Service;

(2) Transmitters in the Offshore Radiotelephone Service;

(3) Transmitters on channels in the 72-76 MHz frequency range;

(4) Base, mobile and auxiliary test transmitters in the Cellular Radiotelephone Service;

(5) Control and repeater transmitters on channels in the 900-960 MHz frequency range;

(6) Rural subscriber stations communicating with base transmitters in the

47 CFR Ch. I (10-1-00 Edition)

Paging and Radiotelephone Service pursuant to § 22.563.

(7) Ground and airborne mobile transmitters in the Air-ground Radiotelephone Service.

(b) *Horizontal.* Waves radiated by transmitters in the Public Mobile Services, other than transmitters required by paragraph (a) of this section to radiate a vertically polarized wave must be horizontally polarized, except as otherwise provided in paragraphs (c) and (d) of this section.

(c) *Circular.* If communications efficiency would be improved and/or interference reduced, the FCC may authorize transmitters other than those listed in paragraphs (a)(1) through (a)(7) of this section to radiate a circularly polarized wave.

(d) *Any polarization.* Public Land Mobile stations transmitting on channels higher than 960 MHz are not limited as to wave polarization.

§ 22.371 Disturbance of AM broadcast station antenna patterns.

Public Mobile Service licensees that construct or modify towers in the immediate vicinity of AM broadcast stations are responsible for measures necessary to correct disturbance of the AM station antenna pattern which causes operation outside of the radiation parameters specified by the FCC for the AM station, if the disturbance occurred as a result of such construction or modification.

(a) *Non-directional AM stations.* If tower construction or modification is planned within 1 kilometer (0.6 mile) of a non-directional AM broadcast station tower, the Public Mobile Service licensee must notify the licensee of the AM broadcast station in advance of the planned construction or modification. Measurements must be made to determine whether the construction or modification affected the AM station antenna pattern. The Public Mobile Service licensee is responsible for the installation and continued maintenance of any detuning apparatus necessary to restore proper non-directional performance of the AM station tower.

(b) *Directional AM stations.* If tower construction or modification is planned within 3 kilometers (1.9 miles)

of a directional AM broadcast station array, the Public Mobile Service licensee must notify the licensee of the AM broadcast station in advance of the planned construction or modification. Measurements must be made to determine whether the construction or modification affected the AM station antenna pattern. The Public Mobile Service licensee is responsible for the installation and continued maintenance of any detuning apparatus necessary to restore proper performance of the AM station array.

§ 22.373 Access to transmitters.

Unless otherwise provided in this part, the design and installation of transmitters in the Public Mobile Services must meet the requirements of this section.

(a) Transmitters and control points, other than those used with in-building radiation systems, must be installed such that they are readily accessible only to persons authorized by the licensee to operate or service them.

(b) Transmitters must be designed and installed such that any adjustments or controls that could cause the transmitter to deviate from its authorized operating parameters are readily accessible only to persons authorized by the licensee to make such adjustments.

(c) Transmitters (other than hand-carried or pack-carried mobile transmitters) and control points must be equipped with a means of indicating when the control circuitry has been put in a condition that should cause the transmitter to radiate.

(d) Transmitters must be designed such that they can be turned off independently of any remote control circuits.

(e) Transmitters used with in-building radiation systems must be installed such that, to the extent possible, they are readily accessible only to persons authorized by the licensee to access them.

(f) Transmitters used with in-building radiation systems must be designed such that, in the event an unauthorized person does gain access, that person can not cause the transmitter to deviate from its authorized operating pa-

rameters in such a way as to cause interference to other stations.

§ 22.377 Certification of transmitters.

Except as provided in paragraph (b) of this section, 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.

(a) 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.

(b) Transmitters operating under a developmental authorization (see subpart D of this part) do not have to be certificated.

(c) In addition to the technical standards contained in this part, transmitters intended for operation in the Cellular Radiotelephone Service must be designed to comply with the technical requirements contained in the cellular system compatibility specification (see § 22.933) and the electronic serial number rule (see § 22.919).

[59 FR 59507, Nov. 17, 1994, as amended at 61 FR 31051, June 19, 1996; 63 FR 36603, July 7, 1998]

§ 22.379 Replacement of equipment.

Licensees may replace any equipment in Public Mobile Service stations without applying for authorization or notifying the FCC, provided that:

(a) If a transmitter is replaced, the replacement transmitter must be certificated for use in the Public Mobile Services;

(b) The antenna structure must not become a hazard to air navigation and its height must not be increased;

(c) The interference potential of the station must not be increased;

§ 22.381

(d) The Effective radiated power, emission type, antenna radiation pattern and center of radiation height above average terrain are not changed.

[59 FR 59507, Nov. 17, 1994, as amended at 63 FR 36603, July 7, 1998]

§ 22.381 Auxiliary test transmitters.

Auxiliary test transmitters may be used only for testing the performance of fixed receiving equipment located remotely from the control point. Auxiliary test transmitters may transmit only on channels designated for mobile transmitters.

§ 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—Developmental Authorizations

§ 22.401 Description and purposes of developmental authorizations.

Communications common carriers may apply for, and the FCC may grant, authority to construct and operate one or more transmitters subject to the rules in this subpart and other limitations, waivers and/or conditions that may be prescribed. Authorizations granted on this basis are developmental authorizations. In general, the FCC grants developmental authorizations in situations and circumstances where it cannot reasonably be determined in advance whether a particular transmitter can be operated or a particular service can be provided without causing interference to the service of existing stations. For example, the FCC may grant developmental authorizations for:

(a) Field strength surveys to evaluate the technical suitability of antenna locations for stations in the Public Mobile Services;

(b) Experimentation leading to the potential development of a new Public Mobile Service or technology; or,

47 CFR Ch. I (10–1–00 Edition)

(c) Stations transmitting on channels in certain frequency ranges, to provide a trial period during which it can be individually determined whether such stations can operate without causing excessive interference to existing services.

§ 22.403 General limitations.

The provisions and requirements of this section are applicable to all developmental authorizations.

(a) Developmental authorizations are granted subject to the condition that they may be cancelled by the FCC at any time, upon notice to the licensee, and without the opportunity for a hearing.

(b) Except as otherwise indicated in this subpart, developmental authorizations normally terminate one year from the date of grant. The FCC may, however, specify a different term.

(c) Stations operating under developmental authorizations must not interfere with the services of regularly authorized stations.

(d) A grant of a developmental authorization does not provide any assurance that the FCC will grant an application for regular authorization to operate the same transmitter(s), even if operation during the developmental period has not caused interference and/or the developmental program is successful.

§ 22.409 Developmental authorization for a new Public Mobile Service or technology.

The FCC may grant applications for developmental authority to construct and operate transmitters for the purpose of developing a new Public Mobile Service or a new technology not regularly authorized under this part, subject to the requirements of this section. Such applications may request the use of any portion of the spectrum allocated for Public Mobile Services in the Table of Frequency Allocations contained in part 2 of this chapter, regardless of whether that spectrum is regularly available under this part. Requests to use any portion of the spectrum for a service or purpose other than that indicated in the Table of Frequency Allocations in part 2 of this