

§ 73.61 AM directional antenna field strength measurements.

(a) Each AM station using a directional antenna with monitoring point locations specified in the instrument of authorization must make field strength measurements as often as necessary to ensure that the field at each of those points does not exceed the value specified in the station authorization. Additionally, stations not having an approved sampling system must make the measurements once each calendar quarter at intervals not exceeding 120 days. The provision of this paragraph supersedes any schedule specified on a station license issued prior to January 1, 1986. The results of the measurements are to be entered into the station log pursuant to the provisions of § 73.1820.

(b) If the AM license was granted on the basis of field strength measurements performed pursuant to § 73.151(a), partial proof of performance measurements using the procedures described in § 73.154 must be made whenever the licensee has reason to believe that the radiated field may be exceeding the limits for which the station was most recently authorized to operate.

(c) A station may be directed to make a partial proof of performance by the FCC whenever there is an indication that the antenna is not operating as authorized.

[50 FR 47054, Nov. 14, 1985, as amended at 73 FR 64560, Oct. 30, 2008]

§ 73.62 Directional antenna system operation and tolerances.

(a) Each AM station operating a directional antenna must maintain the relative amplitudes of the antenna currents, as indicated by the antenna monitor, within 5% of the values specified on the instrument of authorization. Directional antenna relative phases must be maintained within 3 degrees of the values specified on the instrument of authorization.

(b) In the event of a failure of system components, improper pattern switching or any other event that results in operation substantially at variance from the radiation pattern specified in the instrument of authorization for the pertinent time of day, operation must be terminated within three minutes

unless power can be reduced sufficiently to eliminate any excessive radiation. See § 73.1350(e).

(1) Any variation of operating parameters by more than ± 15 percent sample current ratio or ± 10 degrees in phase, any monitor point that exceeds 125 percent of the licensed limit, or any operation at variance that results in complaints of interference shall be considered operation substantially at variance from the license and will require immediate corrective action.

(2) [Reserved]

(c) In the event of minor variations of directional antenna operating parameters from the tolerances specified in paragraph (a) of this section, the following procedures will apply:

(1) The licensee shall measure and log every monitoring point at least once for each mode of directional operation. Subsequent variations in operating parameters will require the remeasuring and logging of every monitoring point to assure that the authorized monitoring point limits are not being exceeded. The licensee will be permitted 24 hours to accomplish these actions; provided that, the date and time of the failure to maintain proper operating parameters have been recorded in the station log.

(2) Provided each monitoring point is within its specified limit, operation may continue for a period up to 30 days before a request for Special Temporary Authority (STA) must be filed, pursuant to paragraph (c)(4) of this section, to operate with parameters at variance from the provisions of paragraph (a) of this section.

(3) If any monitoring point exceeds its specified limit, the licensee must either terminate operation within three hours or reduce power in accordance with the applicable provisions of § 73.1350(d), in order to eliminate any possibility of interference or excessive radiation in any direction.

(4) If operation pursuant to paragraph (c)(3) of this section is necessary, or before the 30-day period specified in paragraph (c)(2) of this § expires, the licensee must request a Special Temporary Authority (STA) in accordance with section 73.1635 to continue operation with parameters at variance and/or with reduced power along with a

statement certifying that all monitoring points will be continuously maintained within their specified limits.

(d) In any other situation in which it might reasonably be anticipated that the operating parameters might vary out of tolerance (such as planned array repairs or adjustment and proofing procedures), the licensee shall, before such activity is undertaken, obtain a Special Temporary Authority (STA) in accordance with § 73.1635 in order to operate with parameters at variance and/or with reduced power as required to maintain all monitoring points within their specified limits.

[72 FR 44422, Aug. 8, 2007]

§ 73.68 Sampling systems for antenna monitors.

(a) Each AM station permittee authorized to construct a new directional antenna system which will be subject to a proof of performance based on field strength measurements, as described in § 73.151(a) or (b), must install the sampling system in accordance with the following specifications:

(1) Devices used to extract or sample the current and the transmission line connecting the sampling elements to the antenna monitor must provide accurate and stable signals to the monitor (e.g., rigidly mounted and non-rotatable loops and all system components protected from physical and environmental disturbances).

(2) Sampling lines for directional antennas may be of different lengths provided the phase difference of signals at the monitor are less than 0.5 degrees between the shortest and longest cable lengths due to temperature variations to which the system is exposed.

(3) Other configurations of sampling systems may be used upon demonstration of stable operation to the FCC.

(b) An AM station permittee authorized to construct a directional antenna system which will be subject to a proof of performance based on moment method modeling, as described in § 73.151(c), shall install a sampling system conforming to the requirements set forth in that section.

(c) A station having an antenna sampling system constructed according to the specifications given in paragraph

(a) of this section may obtain approval of that system by submitting an informal letter request to the FCC in Washington, DC, Attention: Audio Division, Media Bureau. The request for approval, signed by the licensee or authorized representative, must contain sufficient information to show that the sampling system is in compliance with all requirements of paragraph (a) of this section.

NOTE TO PARAGRAPH (C): A public notice dated December 9, 1985 giving additional information on approval of antenna sampling systems is available through the Internet at <http://www.fcc.gov/mb/audio/decdoc/letter/1985-12-09-sample.html>.

(d) In the event that the antenna monitor sampling system is temporarily out of service for repair or replacement, the station may be operated, pending completion of repairs or replacement, for a period not exceeding 120 days without further authority from the FCC if all other operating parameters and the field monitoring point values are within the limits specified on the station authorization.

(e) If the antenna sampling system is modified or components of the sampling system are replaced, the following procedure shall be followed:

(1) Special Temporary Authority (see § 73.1635) shall be requested and obtained from the Commission's Audio Division, Media Bureau in Washington to operate with parameters at variance with licensed values pending issuance of a modified license specifying parameters subsequent to modification or replacement of components.

(2) Immediately prior to modification or replacement of components of the sampling system, and after a verification that all monitoring point values and operating parameters are within the limits or tolerances specified in the rules, the following indications must be recorded for each radiation pattern: Final plate current and plate voltage, common point current, antenna monitor phase and current indications, and the field strength at each monitoring point. Subsequent to these modifications or changes the procedure must be repeated.

(3) If monitoring point field strengths or antenna monitor parameters exceed