

(c) The monitor is checked periodically, during the in-service test evaluation period, for calibration and stability. The tests are made with a standard “Reference and variable phase signal generator” and associated test equipment, including an oscilloscope and portable field detector. In general, the ground check is conducted in accordance with section 8.4 of FAA Handbook AF P 6790.9 “Maintenance Instruction for VHF Omnidirectional”, adapted for the facility concerned.

(d) Flight tests to determine the facility’s adequacy for operational requirements and compliance with applicable “Standards and Recommended Practices” are conducted in accordance with the “U.S. Standard Flight Inspection Manual”, particularly section 201.

(e) After January 1, 1975, the owner of the VOR shall modify the facility to perform in accordance with paragraph 3.3.5.7 of Annex 10 to the Convention on International Civil Aviation within 180 days after receipt of notice from the Administrator that 50 kHz channel spacing is to be implemented in the area and that a requirement exists for suppression of 9960 Hz subcarrier harmonics.

[Doc. No. 5034, 29 FR 11337, Aug. 6, 1964, as amended by Amdt. 171–7, 35 FR 12711, Aug. 11, 1970; Amdt. 171–9, 38 FR 28557, Oct. 15, 1973]

#### § 171.9 Installation requirements.

(a) The facility must be installed according to accepted good engineering practices, applicable electric and safety codes, and the installation must meet at least the Federal Communications Commission’s licensing requirements.

(b) The facility must have a reliable source of suitable primary power, either from a power distribution system or locally generated, with a supplemental standby system, if needed.

(c) Dual transmitting equipment with automatic changeover is preferred and may be required to support certain IFR procedures.

(d) There must be a means for determining, from the ground, the performance of the equipment, including the antenna, initially and periodically.

(e) A facility intended for use as an instrument approach aid for an airport must have or be supplemented by (de-

pending on circumstances) the following ground-air or landline communications services:

(1) At facilities outside of and not immediately adjacent to controlled airspace, there must be ground-air communications from the airport served by the facility. Separate communications channels are acceptable.

(2) At facilities within or immediately adjacent to controlled airspace, there must be the ground-air communications required by paragraph (e)(1) of this section and reliable communications (at least a landline telephone) from the airport to the nearest FAA air traffic control or communication facility.

Paragraphs (e) (1) and (2) of this section are not mandatory at airports where an adjacent FAA facility can communicate with aircraft on the ground at the airport and during the entire proposed instrument approach procedure. In addition, at low traffic density airports within or immediately adjacent to controlled airspace and where extensive delays are not a factor, the requirements of paragraphs (e) (1) and (2) of this section may be reduced to reliable communications (at least a landline telephone) from the airport to the nearest FAA air traffic control or communication facility, if an adjacent FAA facility can communicate with aircraft during the proposed instrument approach procedure, at least down to the minimum en route altitude for the controlled airspace area.

[Doc. No. 5034, 29 FR 11337, Aug. 6, 1964, as amended by Amdt. 171–7, 35 FR 12711, Aug. 11, 1970; Amdt. 171–16, 56 FR 65664, Dec. 17, 1991]

#### § 171.11 Maintenance and operations requirements.

(a) The owner of the facility must establish an adequate maintenance system and provide qualified maintenance personnel to maintain the facility at the level attained at the time it was commissioned. Each person who maintains a facility must meet at least the Federal Communications Commission’s licensing requirements and show that he has the special knowledge and skills