

Technical Narrative in Support of Form 302-FM

This application for license is filed pursuant to Section 73.1690(c)(2) of the Commission's Rules. As permitted under that rule, new relative field values are included which reduce the authorized composite antenna pattern so as to bring the measured antenna pattern into compliance with the 85 percent requirement. See Section 73.1690(c)(2)(ii). The following exhibits are supplied:

- A "Proof of Performance" from Dielectric, the antenna's manufacturer. The Proof of Performance contains:
 - A detailed description of the antenna and the procedures used to measure the directional antenna pattern. §73.1690(c)(2)(iii).
 - A polar plot and tabulation of new relative field values of the authorized composite antenna pattern. §73.1690(c)(2)(ii). The new composite antenna pattern meets the requirement of Section 73.316(b)(1) (ratio of the maximum to minimum radiation in the horizontal plane is 15 dB or less).¹ Both the authorized and measured patterns meet the requirement of Section 73.316(b)(2) (no more than 2 dB variation per 10 degrees azimuth).
 - A polar plot and tabulation of the measured directional antenna pattern. These exhibits demonstrate that neither the horizontal nor the vertical components exceeds the authorized composite antenna pattern along any azimuth. §73.1690(c)(2)(i).
- A showing that the RMS of the measured antenna pattern is at least 85% of the authorized antenna pattern. §73.1690(c)(2)(ii). As discussed above, in order to make this showing, the composite antenna pattern envelope has been reduced.
- A certification from David A. Nesbitt, a licensed surveyor, that the antenna is oriented to the proper azimuth. §73.1690(c)(2)(iv).
- An engineer's certification from Gale Gilbreath, who oversaw installation of the antenna, that the antenna was installed pursuant to Dielectric's instructions. §73.1690(c)(2)(iv).

¹ The measured composite pattern exceeds the 15 dB maximum-to-minimum ratio, as permitted under the Commission's rules and policies. *See Amendment of Part 73 of the Commission's Rules to Permit Short-Spaced FM Station Assignments by Using Directional Antennas*, 6 FCC Rcd 5356 at ¶ 40 (1991).