

APPLICATION FOR STATION LICENSE
IRON RANGE BROADCASTING, INC.
WEVE-FM RADIO STATION
CH 250C1 - 97.9 MHZ - 100.0 KW (DA)
EVELETH, MINNESOTA
January 2008

TECHNICAL STATEMENT

This Technical Statement was prepared on behalf of Iron Range Broadcasting, Inc. (“IRB”), licensee of radio station WEVE-FM, Channel 250C1, Eveleth, Minnesota. IRB holds an outstanding construction permit to make minor changes in the facilities of WEVE-FM (BPH-20071016AIW). IRB herein submits a license application to cover the outstanding permit. It is requested that the Commission review this submission and authorize full power operation for WEVE-FM. A calculation of the transmitter power output of the WEVE-FM transmitter is attached as Exhibit A. It is noted that the WEVE-FM measured antenna proof indicates that the maximum gain of the horizontal polarization is slightly higher than that of the vertical polarization. As such, the antenna is considered elliptically polarized (rather than circular) with a horizontal power of 100.0 kilowatts and a horizontal power of 98.0 kilowatts.

There are six operating conditions/restrictions on the WEVE-FM permit. The first four conditions relate to the use of a directional antenna system for WEVE-FM. Attached as Exhibit B1 is an antenna proof of performance from Shively Labs (“Shively”), the manufacturer of the WEVE-FM antenna system, demonstrating the compliance of the antenna system with the

requirements and limits contained in the permit. The measured pattern (composite of horizontal and vertical) is within 85% of the envelope pattern submitted with the construction permit application. Further, attached as Exhibit B2 is a statement from an engineer that the antenna was assembled and installed in accordance with Shively's specifications. Finally, attached as Exhibit B3 is a verification from a Land Surveyor that the antenna is oriented as specified by Shively.¹ Further, as detailed in Exhibit B1, the power of WEVE-FM at 80° true is below the required limit of 11.0 kilowatts; the relative field at 80° (horizontal) is 0.310, a power level of 9.6 kilowatts, and the relative field at 80° (vertical) is 0.242, a power level of 5.9 kilowatts.²

The fifth condition requires IRB to specify a Shively 6810 antenna, six section antenna system (EPA/FCC Type #6) to demonstrate compliance with the radio frequency electromagnetic field exposure guidelines. As indicated in this instant license application, IRB is using a Shively 6810-6R-DA, six bay full wavelength antenna system for WEVE-FM. As such, this condition is met.

The last condition states that IRB will reduce the power of WEVE-FM, or cease operation as needed, to insure that persons with access to the tower will not be exposed to radio frequency radiation levels in excess of the Commission's guidelines. WEVE-FM will comply with this requirement. Based on the foregoing, it is believed that WEVE-FM is operating in compliance with the Commission's rules and that all conditions have been met.

1) 240° true orientation.

2) Based on a power level of 100.0 kilowatts.