

RF HAZARD STATEMENT

RADIO STATION WAYE
BIRMINGHAM, ALABAMA
1220 KHZ, 1 KW, D

This statement was prepared for AM broadcast station WAYE, Birmingham, Alabama (1220 kHz). This statement concerns an evaluation of compliance with Section 1.1307(b) of the FCC Rules* regarding human exposure to radio frequency (RF) energy.

The proposed WAYE facility will operate with a non-directional antenna with a nominal daytime power level of 1 kW. The antenna tower element has an electrical height of 84.8° (0.236 wavelength) at 1220 kHz. The antenna is to be diplexed with station WJLD (1400 kHz), which operates with a nominal power of 1 kW. At WJLD's frequency, the electrical height of the antenna is 97.4° (0.27 wavelength).

The area around the WJLD tower is enclosed by a fence that is located no less than 4-m from the base of the tower. Electric and magnetic field calculations were made for the WAYE and WJLD facility at the fence perimeter utilizing Figures 1, 2 and 3, "MININEC AM Model for 1 kW (Field Strength v. Distance)," provided in Supplement A of the FCC *OET Bulletin No. 65*.[†] From these calculations it was determined that the combined electric and magnetic fields of the WAYE facility will not exceed 21.2% of the FCC maximum permissible exposure (MPE) for General Population / Uncontrolled (GP/U) exposure.[‡]

Using the same technique for the WJLD facility, it was determined that the combined electric and magnetic fields of the WJLD facility do not exceed 15.7% of

* See Rules of the United States Federal Communications Commission (FCC), generally at Title 47 of the Code of Federal Regulations (Telecommunication).

[†] See FCC Office of Engineering and Technology Bulletin No. 65, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, Edition 97-01, released August, 1997, and *Supplement A: Additional Information for Radio and Television Broadcast Stations*

[‡] The FCC exposure limits for GP/U environments for a frequency of 1220 kHz are 614 V/m and 1.63 A/m, for electric and magnetic fields, respectively. Using linear interpolation from the graphs of Figs. 1 & 2, the electric field is calculated to be 43.4 V/m and the magnetic field is calculated to be 0.23 A/m. These are 7.1% and 14.1% of the FCC MPE levels for GP/U exposure, respectively.

the FCC MPE for GP/U exposure.[§] Therefore, the total RF exposure level from both facilities will not exceed 36.9% of the FCC MPE for GP/U exposure at the minimum radial fence distance of 4 m.

Based on the foregoing it is concluded that the WAYE proposal is compliant with the FCC's RF hazard exposure requirements. In the event that personnel are required to enter the fenced area surrounding the base of the tower, the power levels shall be reduced or terminated as necessary to prevent human exposure to radio frequency energy in excess of FCC specified levels.

[§] The FCC exposure limits for GP/U environments for a frequency of 1400 kHz are 588.6 V/m and 1.56 A/m for electric and magnetic fields, respectively. Using linear interpolation from the graphs of Figs. 2 & 3, the electric field is calculated to be 20.7 V/m and the magnetic field is calculated to be 0.19 A/m. These are 3.5% and 12.2% of the FCC MPE levels for GP/U exposure, respectively.