

MINOR CHANGE APPLICATION
GULF COAST COMMUNITY COLLEGE
WKGC-FM RADIO STATION
CH 214C1 - 90.7 MHz - 100.0 kW - ND
PANAMA CITY, FLORIDA
February 2006

EXHIBIT C

Radio Frequency Assessment

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. §1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997 ("Bulletin"), regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. This study considers all nearby contributing stations and utilizes the appropriate formulas contained in the OET Bulletin.²

The proposed WKGC-FM antenna system will be mounted with its center of radiation 107.3 meters (352 feet) above the ground at the tower location and will operate with an effective radiated power of 100 kilowatts in the horizontal and vertical planes (circularly polarized). It is proposed to utilize a twelve bay Electronics Research rototiller style antenna (FCC Type 3). At two meters, the height of an average person, above the ground at the base of the tower, the WKGC-FM antenna system will contribute 0.028 mw/cm².³ Based on exposure limitations for a controlled environment, 2.8% of the allowable ANSI limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 14% of the ANSI limit is reached at two meters above the ground at the base of the tower.

2) The contribution of the FM station was calculated with the FMModel program.

3) This level of contribution occurs at 23 meters out from the tower and is considered worst case.

WKGC (AM) will operate on 1480 kHz with a non-directional power of 5.0 kilowatts, utilizing a 126.5 meter (415 foot) vertical radiator, 224.8° electrically, at 1480 kHz. The WKGC (AM) antenna is proposed to be fenced at a distance no closer than 3 meters to the radiator. At that distance the electric field produced is 293.2 V/m while the magnetic field is 0.168 A/m. Since the station operates above 1340 kHz, the limits for controlled and uncontrolled are different. By reference to the OET bulletin, this constitutes 47.8% of the controlled electric field limit of 614 V/m or 10.3% of the controlled magnetic field limit of 1.63 A/m. The electric field also represents 52.7% of the uncontrolled electric field limit of 556.8 V/m. The uncontrolled magnetic field represents 11.3% of the uncontrolled magnetic field limit of 1.48 A/m. Since the electric field contribution in the uncontrolled environment is the greater of all the limits, it will be considered worst case contribution to the uncontrolled field.

By adding the individual contribution percentages from each facility for uncontrolled environments (14 - WKGC-FM and 52.7% - WKGC (AM)), a total of 66.7% of the limit is reached at two meters above ground at the tower base. Since this level for uncontrolled environments is below the 100% limit defined by the Commission, the proposed WKGC-FM facility is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, Gulf Coast Community College will verify that warning signs are posted in the vicinity of the tower(s) warning of potential radio frequency radiation hazards at the site. In addition, Gulf Coast Community College will reduce the power of the facility or cease operation, in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower or antenna from radio frequency radiation in excess of FCC guidelines.