



## TECHNICAL FACILITY

The proposed WEGM(FM), one-bay, auxiliary antenna will be side-mounted on an existing tower which currently supports the WEGM(FM) main antenna. The WEGM(FM) main antenna is licensed to operate with an ERP of 25 kW and is installed on the tower such that its overall height above ground level is 25 meters. The proposed auxiliary facility will operate with an ERP of 1.0 kW and the auxiliary antenna will be mounted below the WEGM(FM) main antenna at a centerline height of 18 meters. By definition, the WEGM(FM) main facility will never be in operation at the same time as the proposed auxiliary facility.

Because the proposed auxiliary facility will operate from the same tower with a lower ERP from an antenna mounted below the licensed main antenna, the 1.0 mV/m contour of the proposed auxiliary cannot extend beyond the 1.0 mV/m contour of the licensed main facility. Therefore, compliance with Section 73.1675 of the FCC Rules is assured.

## COLOCATED STATIONS AND/OR STATIONS WITHIN 315 METERS

There are no licensed broadcast facilities colocated with WEGM(FM). The transmitter sites for the following operating broadcast stations are located 234 meters from the WEGM(FM) transmitter site. Considering the WEGM(FM) antenna height, the antenna heights of the nearby stations and the 234 meters distance between the stations, the computed antenna distance from the listed station to the base of the WEGM(FM) tower is indicated below. This antenna distance will be used as the antenna height in the power density prediction equations discussed in the "Radiofrequency Impact" section of this statement.

- WIPM-TV, Mayaguez, PR - Channel 3+; 81.3 kW ERP; computed antenna distance 249 meters.
- WOLE-TV, Aguadilla, PR - Channel 12+; 275 kW ERP; computed antenna distance 241 meters.
- WNJX-TV, Mayaguez, PR - Channel 22z; 4201 kW ERP; computed antenna distance 239 meters.
- WNJX-DT STA, Mayaguez, PR - Channel 23; 54.5 kW ERP; computed antenna distance 237 meters.
- W54AQ, Yauco, Etc., PR - Channel 54-; 1.29 kW ERP; computed antenna distance 234 meters.

## RADIOFREQUENCY IMPACT

Effective October 15, 1997, the FCC adopted its current guidelines and procedures for evaluating environmental effects of radiofrequency emissions. The current guidelines are generally based on recommendations by the National Council on Radiation Protection and Measurements (NCRP) in NCRP Report No. 86 (1986), and by the American National Standards Institute and the Institute of Electrical and Electronic Engineers, Inc. (IEEE) in ANSI/IEEE C95.1-1992 (IEEE C95.1-1991). The FCC guidelines provide a maximum permissible exposure (MPE) level for occupational or “controlled” situations, as well as “uncontrolled” situations that apply in cases that affect the general public. The FCC’s Office of Engineering and Technology (OET) Commission issued a technical bulletin (OET Bulletin No. 65) entitled, “Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields” (Edition 97-01, August 1997), to aid in the determination of whether FCC-regulated transmitting facilities, operations or devices comply with limits for human exposure to radiofrequency electromagnetic fields as adopted by the Commission in 1996. The Bulletin contains updated and additional technical information for evaluating compliance with the current FCC policies and guidelines.

The current FCC MPE level for “uncontrolled” environments is 0.2 milliwatt per centimeter squared or  $200 \mu\text{W}/\text{cm}^2$  for FM facilities. The MPE level for FM facilities in a “controlled” environment is  $1.0 \text{ mW}/\text{cm}^2$  ( $1000 \mu\text{W}/\text{cm}^2$ ). For a worst-case RFR study, the stations listed above will be considered to be co-located with WEGM(FM).

The WEGM(FM) auxiliary facility will operate with an ERP of 1.0 kW at an antenna radiation centerline height of 18 meters above ground level using a 1 bay, Rototiller-type, transmitting antenna. Based on the FCC’s Office of Engineering and Technology FM Model program, the WEGM(FM) auxiliary facility is predicted to produce a maximum power density of  $58.1 \mu\text{W}/\text{cm}^2$  at two meters above ground level which is 29.1% of the FCC guideline value for “uncontrolled” environments.

Using the maximum authorized power, the computed antenna distance discussed above and a very conservative vertical relative field value of 0.3 for the television facilities listed above (OST Bulletin 65, Edition 97-01 suggests a vertical field value of 0.2), worst-case calculations predict the five television facilities listed above will produce a total power density at the WEGM(FM) transmitter site which amounts to 36.8% of the FCC guideline value for “uncontrolled” environments.

The cumulative power density of all the stations considered above represents only 65.9% of the FCC guideline value “uncontrolled” environments. Because this value is less than 100%, the multiple use site is in compliance with the Commission’s radiofrequency radiation (RFR) guidelines for uncontrolled environments.

## OCCUPATIONAL SAFETY

Based on the calculations discussed above, the cumulative power density at the multiple use site represents only 13.2% of the FCC guideline value in a “controlled” or occupational RFR environment. Radio station WEGM(FM) remains committed to reducing power and/or ceasing operation during times of service or maintenance of the transmission systems as necessary to avoid potentially harmful exposure to personnel.