



**STATEMENT OF WILLIAM J. GETZ
IN SUPPORT OF AN
APPLICATION FOR LICENSE
AND A REQUEST FOR PROGRAM TEST AUTHORITY
WGTS(FM) - TAKOMA PARK, MARYLAND
CHANNEL 220B, 23.5 kW, 186 m HAAT
FACILITY ID NO. 12460**

Prepared for: Columbia Union College Broadcasting, Inc.

I am a Radio Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission.

This office has been authorized by Columbia Union College Broadcasting, Inc. ("Columbia Union College"), to prepare this statement and Section III of FCC Form 302-FM in support of an Application for License to cover the WGTS(FM), Takoma Park, Maryland, outstanding Construction Permit (File No. BMPED-20010629ACR) and a Request for Program Test Authority.

In order for automatic program test authority to apply, the outstanding WGTS(FM) Construction Permit required Columbia Union College to specify the exact nondirectional antenna specified in the application for construction permit. Instead, WGTS(FM) will use the existing ERI antenna system, the existing antenna and the existing transmission line. No antenna or tower construction was performed to add WGTS(FM) to the existing antenna system. As a result, the special condition to the WGTS(FM) construction permit relating

to “the construction of the tower” affects on the nearby WABS(AM) directional antenna array is moot.¹ However, because the WGTS(FM) antenna specified herein is not the antenna specified in special condition #2 of the outstanding construction permit, a complete showing demonstrating compliance with the FCC’s RFR guidelines is contained below.

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.

¹ If a letter of consent from WABS(AM) is required by the Audio Division to process this license application, the letter will be provided upon request.

The current FCC MPE level for “uncontrolled” environments is 0.2 milliwatt per centimeter squared ($\mu\text{W}/\text{cm}^2$) or 200 $\mu\text{W}/\text{cm}^2$ for FM facilities. The MPE level for FM facilities in a “controlled” environment is 1.0 $\mu\text{W}/\text{cm}^2$.

Radio station WGTS(FM) shares the WETA(FM) main antenna. The auxiliary antennas for WCSP(FM), WJZW(FM) and WETA(FM) and the WETA-DT antenna are also located on the existing support structure. By definition, the WETA(FM) auxiliary facility will not be in operation during the time the main WETA(FM) antenna is operating. Because the WETA(FM) main facility provides for a worst-case RFR analysis, the WETA(FM) auxiliary facility is not considered in the RFR study. Because the WGTS(FM) transmitter site is a multiple-use transmitter site, the percentage of the FCC guideline value each facility contributes must be determined, and the sum of the individual contributions must not exceed 100% of the FCC guideline value.

The WGTS(FM) facility will operate with a circularly polarized ERP of 23.5 kW from the WETA(FM) Electronics Research, Inc., FMH-6AE, 6-bay, full wavelength spaced, nondirectional transmitting antenna with a centerline height of 139 meters above ground level (AGL). Based on the FCC’s FM model program which considers the specific transmitting antenna type (in this instance the ERI Rototiller type antenna was chosen) and computes the predicted power density of a given station, WGTS(FM) is predicted to produce a maximum power density at two meters above ground level of 5.7 $\mu\text{W}/\text{cm}^2$, which is 2.85% of the FCC guideline value for “uncontrolled” environments.

The WETA(FM) main facility is licensed to operate with a maximum circularly polarized ERP of 75.0 kW with a centerline height of 139 meters above ground level (AGL). Based on the FCC’s FM model program, the WETA(FM) main facility will produce a

maximum predicted power density of $2.6 \mu\text{W}/\text{cm}^2$, which is 1.3% of the FCC guideline value for “uncontrolled” environments.

The WCSP-FM auxiliary facility is licensed to operate on the shared tower with an ERP of 0.600 kilowatts at an antenna height of 117 meters AGL. Based on worst-case considerations, at 2 meters above ground level, the WCSP(FM) auxiliary facility is predicted to produce a power density of $3.0 \mu\text{W}/\text{cm}^2$, which is 1.5% of the FCC guideline value for “uncontrolled” environments.

The WJZW(FM) auxiliary facility operates from the shared tower with an ERP of 40.0 kilowatts (DA-MAX) at an antenna height of 91 meters AGL. The WJZW(FM) auxiliary antenna is a Shively Labs, 3-bay, full-wavelength spaced directional antenna. Based on the FCC’s FM model program, the WJZW(FM) auxiliary facility will produce a maximum predicted power density of $31.8 \mu\text{W}/\text{cm}^2$, which is 15.9% of the FCC guideline value for “uncontrolled” environments.

Digital television station WETA-DT is also licensed to operate from the shared support structure on DTV channel 27 with a horizontally polarized power of 75.0 kW at an antenna height AGL of 126 meters. Considering a conservative vertical relative field factor of 0.3 for UHF antennas, the WETA-DT facility is predicted to produce a power density of $7.33 \mu\text{W}/\text{cm}^2$, which is 0.4% of the FCC guideline value of $1,837 \mu\text{W}/\text{cm}^2$ for UHF Channel 27 in an “uncontrolled” environment.


Considered together, the cumulative predicted power density for the colocated facilities would be only 21.95% of the FCC guideline value in “uncontrolled” environments.

OCCUPATIONAL SAFETY

Based on the calculations discussed above, the cumulative predicted power density at the shared transmitter site represents 4.39% of the FCC guideline value for "controlled" RFR environments. The applicant will insure the protection of station personnel or tower contractors working in the vicinity of the WGTS(FM) antenna. As stated above, WGTS(FM) will reduce power and/or cease operation during times of service or maintenance of the transmission systems as necessary to avoid potentially harmful exposure to personnel. In addition, the applicant will become party to an agreement among the site users to further ensure the safety of workers and the general public.

In light of the above, the WGTS(FM) facility has been constructed in accordance with the terms and conditions of the outstanding Construction Permit. This statement and Sections III of the attached FCC Form 302-FM were prepared by me or under my direct supervision and are believed to be true and correct.

DATED: February 6, 2004



William J. Getz