



**STATEMENT OF WILLIAM J. GETZ  
IN SUPPORT OF AN APPLICATION  
FOR CONSTRUCTION PERMIT  
WAVA(FM) - ARLINGTON, VIRGINIA  
CHANNEL 286B, 33.0 kW ERP, 184 METERS HAAT  
FACILITY ID NUMBER 4644**

I am a Radio Engineer 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 the licensee of FM broadcast station WAVA(FM), Arlington, Virginia, to prepare this statement and the associated exhibits in support of a minor change Application for Construction Permit. This application proposes to relocate WAVA(FM) 0.48 kilometers to an existing support structure.

Radio station WAVA(FM) is presently licensed to operate with a maximum equivalent Class B facility, Effective Radiated Power (ERP) of 41 kW at an antenna Height Above Average Terrain (HAAT) of 165 meters, in accordance with FCC License File No. BLH-891103KB. The WAVA(FM) facility proposed herein (33 kW ERP @ 184 meters HAAT) is equivalent to the presently licensed WAVA(FM) technical facility.

## **ALLOCATION CONSIDERATIONS**

The WAVA(FM) [Channel 286B] site specified herein improves a pre-1964 grandfathered short-spacing with respect to WIOV-FM, Ephrata, Pennsylvania [Channel 286B]. Further, existing short-spacings to WBHB-FM, Bridgewater, VA [Channel 286A] and WHFS(FM), Catonsville, MD [Channel 289B] are also improved and are addressed below.

### **1. Grandfathered Short-Spaced Station (pre-1964)**

As stated above, WAVA(FM) has been short-spaced to WIOV-FM continuously from prior to November, 1964, to the present time. As a result, the WAVA(FM)/WIOV-FM short-spacing is governed by Section 73.213(a) of the FCC Rules. The WAVA(FM) transmitter site proposed herein improves the longstanding short-spacing with WIOV-FM. The WAVA(FM) transmitter site proposed herein is 0.27 kilometers further from WIOV-FM in comparison to the WAVA(FM) licensed transmitter site.

Exhibit 1 depicts the present and proposed WAVA(FM) protected and interfering contours with respect to the appropriate protected and interfering contours at WIOV-FM. As the exhibit illustrates, the instant proposal will decrease the present area of overlap caused and overlap received with respect to WIOV-FM. Accordingly, the proposed WAVA(FM) facility complies with Section 73.213(a)(2) of the FCC rules with respect to pre-1964 grandfathered short-spaced station WIOV-FM.

## **2. Grandfathered Short-Spaced Stations (BC Docket 80-90).**

Prior to the March, 1984, adoption of BC Docket No. 80-90, the required separation for third-adjacent channel related Class B stations was 40 miles. The licensed WAVA(FM) [Channel 286B] facility satisfied this minimum distance spacing requirement because the present WAVA(FM) transmitter site is separated from the WHFS(FM), Catonsville, MD, [Channel 289B] transmitter site by 43.17 miles (69.47 km). With the adoption of BC Docket No. 80-90, the required separation for second-adjacent channel Class B stations was increased to 74 km (45.98 miles). Consequently, WAVA(FM) became 4.53 km short-spaced to WHFS(FM) in March, 1984.

As stated in Paragraph 19 of the Commission's March 13, 1984, *Memorandum Opinion and Order* in BC Docket 80-90, stations (such as WAVA(FM)) which became short-spaced as a result of the increased second and third adjacent channel spacing requirements are grandfathered at their existing sites. Because the WAVA(FM) transmitter site proposed herein is 0.14 kilometers further from WHFS(FM) in comparison to the WAVA(FM) licensed transmitter site and because WAVA(FM) simply proposes to maintain its maximum Class B technical facility, the WAVA(FM) proposal is compliant with FCC Rules and policy with respect to WHFS(FM).

### **3. Section 73.215 Short-Spacings**

The licensed WAVA(FM) transmitter site is 15.93 km short-spaced to the current WBHB-FM, Bridgewater, Virginia [Channel 286A] facility.<sup>1</sup> The WAVA(FM) transmitter site proposed herein improves this short-spacing by 0.08 kilometers. Short-spaced station WBHB-FM operates pursuant to a Section 73.215 authorization. Because WAVA(FM) does not propose to create a new short-spacing or worsen an existing Section 73.215 short-spacing, and because no new contour overlap will occur as a result of the instant proposal (See Exhibit 2), the Applicant **does not** request processing under Section 73.215 with respect to WBHB-FM.<sup>2</sup>

### **PREDICTED COVERAGE CONTOURS**

The predicted coverage contours were calculated in accordance with the method described in Section 73.313 of the Rules utilizing the appropriate F(50,50) propagation

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<sup>1</sup> An Application for License (FCC File No. BLH-20041112ADU) is on file to cover the WBHB-FM Construction Permit File No BPH-20010628ABK. As a result, the prior WBHB-FM license, BLH-941128KB, is not considered herein. However, it should be noted that the WAVA(FM) facility proposed herein also complies with the contour overlap provisions and separation requirements of Section 73.215 with respect to the prior WBHB-FM license.

<sup>2</sup> This is consistent with the intent of the rule and the policy adopted by the Audio Services Division of the FCC. See WCLG-FM, Morgantown, WV, *Application for Construction Permit*, FCC File No. BPH-900518IH, granted 12/4/90; WKRK-FM [formerly WJOI(FM)] Detroit, MI, *Application for Construction Permit*, FCC File No. BPH-930826IC, granted 1/25/94; WPPN [formerly WZFS(FM) and WYLL(FM)] Des Plaines, IL, *Application for Construction Permit*, FCC File No. BPH-19980910IE, granted 12/23/98; and, KDAI [formerly KFSB(FM)] Ontario, CA, *Application for Construction Permit*, FCC File No. BPH-20021106AAT, granted 03/10/03. Applications short-spaced to 73.215 authorizations were not required to request processing under Section 73.215.

curves from the Rules (Section 73.333, Figure 1), effective radiated power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3.2 kilometers to 16.1 kilometers from the proposed site was obtained from a National Geophysical Data Center Thirty Second Point Topographic Database (TGP-0050).

The 3.16 mV/m (70 dBu) city-grade contour completely encompasses the principal community to be served, as required by Section 73.315(a) of the Commission's Rules.

#### **BLANKETING AND INTERMODULATION INTERFERENCE**

The proposed WAVA(FM) antenna will be colocated with the WETA(FM) and WGTS(FM) main antenna and the auxiliary antennas for WCSP-FM, WJZW(FM) and WETA(FM). In addition, the WETA-DT antenna is located on the existing support structure. In the event that blanketing interference occurs, the applicant will take appropriate steps to minimize the interference within the blanketing contour. Further, the applicant accepts the responsibility to alleviate any new intermodulation interference, including receiver induced, resulting from the instant proposal combined with a broadcast facility located within 10 kilometers of the proposed site as required by FCC rules.

In accordance with Commission precedent (See WKLX, Inc., 6 FCC Rcd 225 (1991)), the applicant will exclude both mobile and battery-powered receivers from Receiver Induced Third Order Intermodulation and Blanketing Interference Resolution Requirements. In the event any type of intermodulation interference occurs with any other

facilities which have not been identified, the applicant will take appropriate steps (i.e., install and maintain traps or filters) to minimize the interference in fixed receivers. The applicant will respond to complaints of blanketing interference for a period of one year in compliance with Section 73.318(b) of the Commission's Rules.

### **FAA NOTIFICATION AND TOWER REGISTRATION**

The WAVA(FM) antenna will be side-mounted on an existing tower such that the overall height of the tower is not altered. The tower's FCC tower registration number is 1018169.

### **ENVIRONMENTAL CONSIDERATIONS**

#### **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 ( $\text{mW}/\text{cm}^2$ ) or  $200 \mu\text{W}/\text{cm}^2$  for FM facilities. The MPE level for FM facilities in a "controlled" environment is  $1.0 \text{ mW}/\text{cm}^2$ .

The proposed WAVA(FM) antenna will be colocated with the WETA(FM) and WGTS(FM) main antenna and the auxiliary antennas for WCSP-FM, WJZW(FM) and WETA(FM). In addition the WETA-DT antenna is 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 proposed 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 proposed WAVA(FM) facility will operate with a maximum circularly polarized ERP of 33.0 kW with a centerline height of 137 meters above ground level (AGL). Based on worst-case considerations, the proposed WAVA(FM) facility will produce a maximum

predicted power density of  $121.0 \mu\text{W}/\text{cm}^2$ , which is 60.5% of the FCC guideline value for “uncontrolled” environments.

The WGTS(FM) facility operates with a circularly polarized ERP of 23.7 kW from a 6-bay, 0.9 wavelength spaced, Shively 6814 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 Shively 6800 series 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  $0.82 \mu\text{W}/\text{cm}^2$ , which is 0.41% of the FCC guideline value for “uncontrolled” environments.

Radio station WETA(FM) shares the master antenna with WGTS(FM). 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, and considering the Shively 6800 series antenna, the WETA(FM) main facility produces 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 on 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 80.0% of the FCC guideline value in "uncontrolled" environments.

### **OCCUPATIONAL SAFETY**

Based on the calculations discussed above, the proposed WAVA(FM) facility is predicted to produce a power density which is only 16.0% of the FCC guideline value in "controlled" environments. Radio station WAVA(FM) will reduce power and/or cease operation, in cooperation with other site users, during times of service or maintenance of the transmission systems as necessary to avoid potentially harmful exposure to personnel.

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In light of the above, the proposed WAVA(FM) facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

**SUMMARY**

It is submitted that the proposal described herein complies with the Rules and Regulations of the Federal Communications Commission. This statement, FCC Form 301, Section III-B, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct.

DATED: March 29, 2005

  
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William J. Getz