



**Kessler and Gehman Associates, Inc.**

Telecommunications Consulting Engineers

**ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A MINOR MODIFICATION OF LICENSE APPLICATION TO CORRECT THE ERP IN THE VERTICAL COMPONENT OF THE WXVS-FM CHANNEL 211 CLASS C1, WAYCROSS, GEORGIA NON-COMMERCIAL EDUCATIONAL FM BROADCAST FACILITY FOR THE GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION (GPTC) IN ACCORDANCE WITH §73.1690 (C)(4) OF THE FCC RULES.**

The firm Kessler and Gehman Associates, Inc., has been retained by the Georgia Public Telecommunications Commission (GPTC), Atlanta, Georgia, in order to prepare engineering studies and the engineering portion of a minor modification of license application for the WXVS-FM Channel 211 Class C1 FM broadcast facility (BLED-19860403KD) requesting authorization to correct the licensed ERP in the vertical component.

**Discussion**

GPTC is licensed to operate WXVS-FM Channel 211 C1 with an ERP of 79 kW horizontal polarization and 71 kW vertical polarization using a Jampro model JSCP-4 side-mounted, directional, four-bay antenna with an antenna height radiation center of 280 meters above ground level (AGL). While reviewing the Jampro antenna certification for the licensed antenna (Exhibit 1), it was determined that the vertical component of the ERP was calculated and filed incorrectly when the construction permit and license applications were filed back in 1984 and 1986 respectively with the FCC.

Referring to page 1, Exhibit 1 (Jampro antenna certification), it can be seen that antenna gain in the horizontal component is 6.25 dB and the antenna gain in the vertical component is 6.18 dB. Exhibit 1 also displays the antenna input power for ERP, which includes transmission line loss when calculated, is 18.72 kW which equates to 12.72 dBk. The horizontal component



of the ERP is calculated by adding the antenna gain in the horizontal component (6.25 dB) and the input power (12.72 dBk) equaling 18.97 dBk which equates to the correct ERP of 79 kW in the horizontal component. However, when adding 12.72 dBk plus 6.18 dB for the vertical component, the value is 18.90 dBk which equates to an ERP of 77.6 kW in the vertical component. Therefore, this application requests to correct the ERP in the vertical component from 71 kW to 77.6 kW.

### **TV Channel 6 Studies**

§73.525(a)(1) states that an affected TV Channel 6 station is a TV broadcast station which is authorized to operate on Channel 6 that is located within 196 km of a NCE-FM station operating on Channel 211. The WXVS-FM Channel 211 facility is located approximately 144.2 km from the WCTV-TV Channel 6 station; however, the ERP correction in the vertical component, from 71 kW to 77.6 kW, will not exceed the maximum licensed horizontal ERP (79 kW) and the correction will not result in additional coverage in any azimuthal direction. It should also be recognized that the WCTV-TV Channel 6 facility will no longer be operating on Channel 6 after February 17, 2009 since the Final DTV Table of Allotments, as adopted by the FCC, specifies Channel 46 for the WCTV-DT post-transition operation.

### **Environmental Impact**

The proposed WXVS-FM Channel 211 Class C1 facility would have no significant environmental impact as defined in §1.1307 of the FCC Rules. The FM transmitter, transmission line and antenna system will produce a maximum ERP of 79 kW in the horizontal component and 77.6 kW in the vertical component. It was determined that the maximum lobe of radiation from the base of the tower would occur at approximately 260.4 feet from the base of the tower (944.6-foot radial distance from the antenna center). At approximately 260.4 feet from the base of the tower, the depression angle of the main lobe would be approximately 74.0° below the horizontal. At that point, the relative field is 0.242 and the power density six feet above the



ground would be approximately 0.0037 mW/cm<sup>2</sup>. This would only be 0.37% of the maximum permissible exposure (MPE) limits for Occupational/Controlled Exposure and only 1.86% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (ANSI).

Since operation of the proposed WXVS-FM Channel 211 facility would not exceed 5.0% of the MPE limit for Occupational/Controlled Exposure or General Population/Uncontrolled Exposure at any point on the ground, the proposed WXVS-FM facility would not be considered a “significant contributor” to the RF exposure environment pursuant to OET Bulletin 65, Edition 97-01. Therefore, contributions of exposure from other sources were not accounted for in this analysis. It is safe to conclude that the emissions would be insignificant and well within the maximum allowable requirements.

**Certification**

This technical statement was prepared by William T. Godfrey, Jr., Telecommunications Technical Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.



KESSLER AND GEHMAN ASSOCIATES, INC.

WILLIAM T. GODFREY, JR.  
Telecommunications Technical Consultant

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