



STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN
APPLICATION TO MODIFY A CONSTRUCTION PERMIT
BPCDT-19991019ABD
WCGV-DT – MILWAUKEE, WISCONSIN
DTV - CH. 25 - 625 kW - 340 M HAAT

Prepared for: WCGV Licensee, LLC

I am a Consulting 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. I am a registered Professional Engineer in the Commonwealth of Virginia, Registration No. 7418, and in the State of New York, Registration No. 63418.

GENERAL

This office has been authorized by WCGV Licensee, LLC, licensee of WCGV-TV, channel 24, Milwaukee, Wisconsin, and permittee of paired DTV station WCGV-DT, channel 25, Milwaukee, Wisconsin, to prepare this statement, FCC Form 301, Sections III and III-D, and the associated exhibits in support of an Application to Amend the Construction Permit BPCDT-19991019ABD for digital transmission facilities on Channel 25, the DTV allotment for WCGV-TV. The facility proposed herein differs from the existing Construction Permit in that it is proposed to locate WCGV-DT on a new support structure at 43° 05' 44" N latitude, 87° 54' 17" W longitude; FAA Antenna Structure Registration Number 1057482. The new structure is intended for use by multiple NTSC and DTV stations in the Milwaukee market. Additionally, it is proposed herein to increase the

antenna radiation center Height Above Average Terrain (HAAT) specified in the permit, 307 meters, to 340 meters; an increase of 33 meters. It is also proposed to decrease the Effective Radiated Power (ERP) to 625kW, and utilize a directional transmitting antenna at the new location. This Application for Modification of Construction Permit complies with all applicable FCC Rules pertaining to DTV.

PROPOSED DIRECTIONAL ANTENNA

It is proposed to install a directional antenna, Dielectric model TFU-28DSC-R CT170 DC. This antenna, when installed as proposed, will support the WPXE(DT) antenna which has a pending application to move to the proposed tower site. In a separate application the licensee proposes to relocate the WCGV-TV NTSC facility to this site in order to diplex both the analog and digital signals into the proposed antenna.

Attached as Exhibit 1 is a polar plot of the proposed antenna's horizontal plane radiation pattern in relative field. Exhibit 2 is a tabulation of the proposed omnidirectional antenna's horizontal plane radiation pattern at ten-degree intervals in relative field.

In addition, the proposed directional transmitting antenna shall employ an electrical beam tilt of 0.75 degrees below the horizontal plane. The antenna manufacturer's vertical plane radiation pattern, illustrating the proposed antenna's radiation characteristics above and below the horizontal plane, is attached hereto as Exhibit 3, and tabulated in Exhibit 4. A Vertical Plan Antenna Sketch is provided in Exhibit 5.

PREDICTED COVERAGE CONTOURS

The predicted coverage contours, shown in Exhibit 6, were calculated in accordance with the method described in Section 73.625 of the Rules, utilizing the appropriate F(50,90) propagation curves, power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site was determined using the National Geophysical Data Center Thirty Second Point Database (TPG-0050) as prescribed in the FCC Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. The predicted WCGV-DT 48 dBF signal contour encompasses the entire principal community of license, as required in Section 73.625(a) of the Commission's Rules. The predicted 41 dBF contour is also shown in Exhibit 6.

ENVIRONMENTAL CONSIDERATIONS

GENERAL

The proposal described herein meets the criteria specified in Section 1.1306 of the FCC Rules and Regulations as an action that is categorically excluded from environmental processing. The proposed DTV facility involves neither a site location specified under Section 1.1307(a)(1)-(7) of the Rules nor high intensity lighting as specified in Section 1.1307(a)(8).

RADIO FREQUENCY IMPACT

Effective October 15, 1997, the FCC adopted new guidelines and procedures for

evaluating environmental effects of radio frequency (RF) emissions. The new 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 newly adopted 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 has issued a revised technical bulletin (OET Bulletin No. 65) entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency 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 radio frequency electromagnetic fields as adopted by the Commission in 1996. The revised Bulletin contains updated and additional technical information for evaluating compliance with the new FCC policies and guidelines.

The newly adopted FCC MPE level for “uncontrolled” environments is derived from the formula, $(\text{frequency}/1500)$, for UHF TV stations. The MPE level for UHF stations in a “controlled” environment is derived from the formula, $(\text{frequency}/300)$. We must consider the contributions of our own station, WCGV-DT channel 25, and the other proposed and existing stations at the proposed site. For WCGV-DT, which operates on television Channel 25 (539 MHz), the MPE is 0.359 milliwatts per centimeter squared (mW/cm^2) in

an “uncontrolled” environment and 1.795 mW/cm^2 in a “controlled” environment.

The proposed WCGV-DT facility will operate with a maximum ERP of 625 kW from a horizontally polarized directional transmitting antenna with a centerline height of 346 meters above ground level (AGL). Considering a very conservative vertical plane relative field factor of 0.3, the WCGV-DT facility produces a predicted power density at two meters above ground level of $.01588 \text{ mW/cm}^2$, which is 4.42% of the new FCC guideline value for “uncontrolled” environments, and 0.884% of the new FCC guideline value for “controlled” environments (see Appendix A).

The total percentage of the ANSI value at the proposed site, considering the cumulative radiation of all stations at the site, is only 80.34% of the limit for “uncontrolled” environments, and 16.07% of the limit for “controlled” environments.

OCCUPATIONAL SAFETY

Based on the calculations discussed above, the cumulative predicted power density for the fourteen co-located facilities would be only 16.07% of the FCC guideline value for “controlled” environments. The licensee of WCGV-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WCGV-DT antenna. The applicant is committed to reducing power and/or ceasing operation during times of service or maintenance of the transmission systems, when necessary, to ensure protection of personnel.

In light of the above, the proposed WCGV-DT facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the FCC'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, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

DATED: October 9, 2001


John E. Hidle, P.E.

