



**STATEMENT OF JOHN E. HIDLE, P.E.  
IN SUPPORT OF AN APPLICATION FOR  
A CONSTRUCTION PERMIT FOR A  
MINOR MODIFICATION OF LICENSE  
WPVI-TV - PHILADELPHIA, PENNSYLVANIA  
CH. 6 - 56 kW - 332 meters HAAT**

Prepared for: ABC, Inc.

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 Licensed Professional Engineer in the Commonwealth of Virginia, License No. 7418, and in the State of New York, License No. 63418.

**GENERAL**

This office has been authorized by ABC, Inc., Licensee of WPVI-TV, channel 6, Philadelphia, Pennsylvania, to prepare this statement and the associated exhibits, in support of an application for a construction permit for a minor modification of its license to increase WPVI-TV's authorized Effective Radiated Power (ERP) from 34.0 kW to 56 kW. WPVI-TV seeks a construction permit to implement its proposed ERP increase to 56 kW in a further attempt to ameliorate the multitude of well documented reception problems that have been, and continue to be experienced by potential viewers in the Philadelphia Designated Market Area (DMA).

**PURPOSE OF REQUEST**

As explained herein, WPVI-TV seeks the proposed construction permit for an increase in ERP in order to assist in its efforts to overcome serious reception problems that

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its viewers have historically suffered, and continue even to this day to suffer, since the June 12, 2009 DTV transition date. A very substantial body of serious reception problems that are suffered by digital television stations broadcasting on the VHF channels is well-documented, both before and especially after June 12, 2009. The most serious of the documented reception problems appear to be suffered by the digital television stations that are broadcasting on any one of the low-VHF channels 2 to 6.

Shortly after the DTV transition on June 12, 2009, both WPVI-TV and another digital television station broadcasting on channel 6, WRGB in Schenectady, New York, filed applications for new DTV construction permits seeking increases in ERP, in a mutual attempt to ameliorate the very serious reception deficiencies that their viewers were suffering, and to try to improve the likelihood of potential viewers being able to receive usable signals from the stations. WPVI-TV's application, BPCDT-20090617ADQ, and WRGB's application, BPCDT-20090622ABV, were both granted on March 16, 2011, each construction permit authorizing equal ERPs of 30.2 kW. Subsequently, WPVI-TV obtained authorization to relocate to a different tower 249 meters away, with a lower HAAT, and corresponding slight increase in ERP to 34.0 kW.

WRGB's license application, BLCDDT-20110428ABT, was granted on August 15, 2011. WPVI-TV's license application, BLCDDT-20111019ACJ, was granted on February 17, 2012. WPVI-TV's authorized ERP increase was implemented in October 2011, but there remain many reception problems, many of which appear to result from lack of sufficient signal level at many viewers' locations. The applicant believes that most of these remaining reception problems could be solved by the requested 2.17 dB increase in ERP.

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Therefore, for the stated reasons, WPVI-TV herein proposes to increase its authorized ERP by 2.17 dB on a permanent basis.

**REQUEST FOR WAIVERS**

To any extent necessary, WPVI-TV also requests waivers of Sections 73.622(f)(7)(ii) and 73.622(f)(5) of the Commission's rules. The Media Bureau previously has approved WPVI-TV's applications for construction permits to operate facilities at power levels in excess of the Zone I limit, which applications specified facilities that would define WPVI-TV as the largest station in the Philadelphia DMA. See FCC File Nos. BPCDT-20090617ADQ, BPCDT-20110525ACX, and BMPCDT-20110831ABM. As explained herein, WPVI-TV anticipates that the enhanced facilities that are proposed herein will enable it to resolve most, if not all, of its remaining reception problems. Accordingly, it is in the public interest to further waive Sections 73.622(f)(7)(ii) and 73.622(f)(5) to the extent necessary for the grant of the instant application for a construction permit.

**AUTHORIZED FACILITY**

WPVI-TV's current authorization, BLCDT-20111019ACJ, allows a facility with an ERP of 34.0 kW at a Height Above Average Terrain (HAAT) of 330 meters. WPVI-TV's authorized antenna is a Dielectric Model CBR-O3FMB-6/18H-1 channel 6 omni-directional circularly polarized antenna on the tower bearing registration number 1035474, with its radiation center line located 320.7 meters above ground level, and 330 meters above average terrain. The authorized antenna employs an electrical beam-tilt of 1 degree below the horizontal plane.

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**PROPOSED FACILITY**

For the purposes of this instant application for construction permit WPVI-TV proposes to use, in lieu of its currently authorized antenna, its formerly licensed antenna, as was authorized in BLCDT-20110503ACH. WPVI-TV's previously licensed antenna is an RCA Model TF-6BH mounted at a HAAT of 332 meters, on a tower bearing FCC registration number 1023152, with its radiation center line located 327.1 meters above ground level. The formerly licensed antenna employs no electrical beam tilt.

**ALLOCATION CONSIDERATIONS**

A study was performed, using the FCC's software, *tvstudy*, v. 2.2.4, to determine if the instant application for construction permit is predicted to any cause new prohibited interference to post reassignment DTV stations, construction permits, DTV allotments or Class A DTV stations. The study results, shown in Appendix B, indicate that the instant proposal is predicted to cause no new interference exceeding 0.5% to the populations served by any post reassignment DTV station, construction permit, allotment or Class A DTV stations, except WRGB, channel 6, Schenectady, New York, which has entered into a mutual interference acceptance agreement with WPVI-TV and therein accepts the 1.69% new interference predicted in the aforementioned study.

**AM Radio Station Considerations**

The study shows that WPVI-TV's formerly licensed, and currently proposed, broadcast tower site is located 0.34 kilometers from directional daytime AM radio station WNWR, 1540 kHz, 50 kW, DA-D, licensed to Philadelphia, Pennsylvania. WPVI-TV has previously demonstrated that the facilities authorized by BPCDT-20110525ACX will have

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effectively no impact on the directional antenna radiation pattern of AM radio station WNWR. See Letter of Barbara A. Kreisman, Chief, Video Division, to Susan L. Fox & Howard F. Jaeckel (Oct. 4, 2011), (MB 2011) (“October 2010 Letter”); Letter of Barbara A. Kreisman, Chief, Video Division, to Howard Jaeckel & John W. Zucker (Aug. 31, 2010), 25 FCC Rcd 12562 (MB 2010); see also FCC File No. BPCDT-20110525ACX, Engineering Statement at 4; Opposition to Petition for Rescission and Informal Objection at Exhibit C (Technical Statement). The instant proposal seeks only to increase WPVI-TV’s ERP at its existing previously licensed site, and does not propose any physical modification of its transmission system at all. It is, therefore, inconceivable that implementation of the instant proposal could result in any measurable effect on WNWR. See October 2010 Letter at 2.

**PREDICTED COVERAGE CONTOURS**

The predicted coverage contours were calculated in accordance with the method described in Section 73.625(b) of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), proposed 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 kilometers to 16 kilometers from the site, was determined using the NED Three Second US Terrain Database as permitted in the FCC Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. Exhibit 1 contains the predicted DTV Noise Limited (28 dBu) contour and the predicted principal community (35 dBu) contour. The predicted 35 dBu contour entirely encompasses the principal community, Philadelphia, Pennsylvania.

**BLANKETING AND INTERMODULATION INTERFERENCE**

Other broadcast and non-broadcast technical facilities are co-located with, or located within 10 km of the proposed WPVI-TV transmitter/antenna site. The applicant recognizes its responsibility to remedy complaints of interference which might result from this proposal in accordance with applicable Rules.

**RADIO FREQUENCY IMPACT**

The FCC's guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions 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, LLC (IEEE) in ANSI/IEEE C95.1-1992 (IEEE C95.1-1991). The guidelines define a maximum permissible exposure (MPE) level for occupational or "controlled" situations, and for "uncontrolled" environments that apply in all other cases that might affect the general public. The FCC Office of Engineering and Technology's technical bulletin No. 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (Edition 97-01, August 1997), provides assistance to determine whether FCC-regulated facilities comply with guidelines for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. OET Bulletin No. 65 contains the technical information necessary to evaluate compliance with the FCC's policies and guidelines. The Maximum Permitted Exposure (MPE) level for broadcast facilities that operate on a frequency between 30 MHz and 300 MHz is 200 microwatts per centimeter squared ( $\mu\text{W}/\text{cm}^2$ ) for an "uncontrolled" environment, and is

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1000 microwatts per centimeter squared ( $\mu\text{W}/\text{cm}^2$ ) for a “controlled” environment. The MPE level for broadcast facilities that operate on a frequency between 300 MHz and 1500 MHz, primarily UHF DTV stations, is determined for an “uncontrolled” environment by dividing the operating frequency in MHz by 1.5, and is determined for a “controlled” environment by dividing the operating frequency in MHz by 0.3.

The predicted emissions of WPVI-TV operating on channel 6 must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WPVI-TV, which will operate on television channel 6 (82-88 MHz), the MPE is 200 microwatts per centimeter squared ( $\mu\text{W}/\text{cm}^2$ ) in an “uncontrolled” environment and 1000  $\mu\text{W}/\text{cm}^2$  in a “controlled” environment. The proposed WPVI-TV facility will operate with a maximum ERP of 56 kW using a horizontally polarized omni-directional transmitting antenna with a centerline height of 327.1 meters above ground level (AGL). Considering the proposed antenna’s vertical plane relative field factor of 0.38 the WPVI-TV facility is predicted to produce a power density at two meters above ground level of 2.588  $\mu\text{W}/\text{cm}^2$ , which is 1.29% of the FCC guideline value for an “uncontrolled” environment, and 0.258% of the FCC’s guideline value for “controlled” environments.

There are three other full-service DTV stations, and eight FM radio stations that are authorized to be located at the site, or within the relevant proximity of 315 meters. The total percentage of the ANSI value at the proposed site, including the cumulative radiation based on actual field factors, from all post-transition broadcast stations within the relevant proximity is 15.33% of the limit for “uncontrolled” environments, and 3.07% of the limit for “controlled” environments. (See Appendix A)

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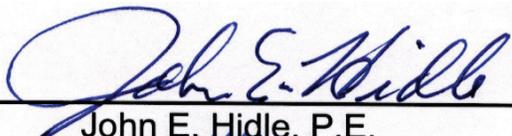
**OCCUPATIONAL SAFETY**

The applicant is committed to the protection of station personnel and/or tower contractors working on the tower support structure, or in the vicinity of the proposed WPVI-TV antenna, by reducing power and/or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure the proper protection of persons who might be required to perform their assigned tasks in this “controlled” environment.

**SUMMARY**

WPVI-TV contends that its instant application for construction permit seeking to increase its authorized ERP from 34.0 kW to 56 kW, as described herein, is in the public interest, and, except in the instance(s) where waiver(s) exist, and/or are requested, complies with the Rules, Regulations, and Policies of the Federal Communications Commission. This statement 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: November 24, 2017

  
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John E. Hidle, P.E.

