



**STATEMENT OF JOHN E. HIDLE, P.E.  
IN SUPPORT OF AN APPLICATION FOR  
MODIFICATION OF A  
POST-TRANSITION CONSTRUCTION PERMIT  
BMPCDT-20091106AER  
WTTA - ST. PETERSBURG, FLORIDA  
DTV - CH. 32 - 1000 kW - 466.6 m HAAT**

Prepared for: BAY TELEVISION, 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 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 BAY TELEVISION, INC., licensee of WTTA, channel 38, licensed to St. Petersburg, Florida, to prepare this statement, FCC Form 301, Sections III and III-D, and the associated exhibits in support of an application to modify its construction permit, BMPCDT-20091106AER, which authorizes WTTA to substitute DTV channel 32 for DTV channel 38 for post-transition use, in accordance with the Report and Order in MB Docket No. 09-159, RM-11557, DA 09-2181. The permit authorizes WTTA to replace its former channel 38 analog antenna with a new channel 32 omni-directional antenna for post-transition for digital operation. The owner of the tower support structure has determined that the authorized channel 32 antenna must be installed at a different location on the tower structure, which will require a small increase in WTTA's Height Above Average Terrain (HAAT). No other changes are proposed.

### **PROPOSED OMNI-DIRECTIONAL ANTENNA**

The applicant proposes to install a Dielectric model TFU-34JTH/VP-R O4SP elliptically polarized omni-directional transmitting antenna with its center of radiation located at a height above ground of 463.4 meters, and a height above average terrain of 466.6 meters. The antenna manufacturer's vertical plane radiation pattern, illustrating the antenna's radiation characteristics above and below the horizontal plane, due to electrical beam tilt, is shown in Exhibits 2 and 3, and is tabulated in Exhibit 4. The horizontal plane azimuth pattern of the vertically polarized component is shown in Exhibit 5 and tabulated in Exhibit 6. The ERP of the vertically polarized signal is 560 kW.

### **PREDICTED COVERAGE CONTOURS**

The predicted coverage contours were calculated in accordance with the method described in Section 73.684 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 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. Exhibit 1 shows the predicted Noise Limited (41 dBu) contour, and the principal community (48 dBu) contour. The 48 dBu contour wholly encompasses the principal community of license, St. Petersburg, Florida.

## **ALLOCATION CONSIDERATIONS**

### **DTV Allocation Considerations**

A study was performed, using the Commission's application processing software tv\_process to determine if the instant application for construction permit for WTTA is predicted to cause any level of new prohibited interference to any domestic DTV stations, expansion construction permits, pending applications or DTV allotments. Results of the study indicate that the instant application is predicted to cause no impermissible level of new interference to the populations to be served by any domestic DTV station, expansion construction permit, pending DTV application or DTV allotment.

### **Class A Television Allocation Considerations**

As required in Section 73.616(f) of the FCC's Rules, a study was performed using the FCC's application processing software. The study revealed that WTTA's proposed site is located inside the contour of Class A station WSVT-CA, channel 18, Tampa, Florida, BLTTA-20040303ABP, and shows one predicted contour overlap with co-channel Class A LPTV station WYDT-CA, Naples, Florida, BLTTL-19980130JC. However, the Longley-Rice section of the study results determined that regarding WSVT-CA, the predicted new interference amounts to 758 persons, or 0.06%; regarding WYDT-DA, the study result states that the "Proposal causes no interference". The instant application is therefore considered to be in compliance with Section 73.616(f). No Class A station is detrimentally affected by WTTA's proposed operation on channel 32.

### **LARGEST STATION IN THE MARKET**

The processing study stated that "Facility does not meet maximum height/power limits - Channel 32 ERP = 1000.00 HAAT = 466.6" Pursuant to Section 73.622(f)(5), Exhibit 6 shows that the station with the largest geographic coverage in the market appears to be WTVT, channel 12, 72.3 kW, 436 meters HAAT. Therefore, WTTA's proposed facility, which covers a smaller area than WTVT, complies with Section 73.622(f)(5).

### **BLANKETING AND INTERMODULATION INTERFERENCE**

A number of broadcast and non-broadcast facilities are co-located with, as well as located within 10 km of the WTTA antenna site. Even though the application processing software study predicts no problematic interaction with other facilities, or to FCC monitoring stations, the applicant recognizes its responsibility to remedy complaints of interference that might result from this proposal in accordance with applicable Rules.

### **RADIO FREQUENCY IMPACT**

Effective October 15, 1997 the FCC adopted new guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions. The 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, 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 that apply in cases that

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 transmitting facilities, operations or devices comply with guidelines for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. 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 0.2 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) for an "uncontrolled" environment, and is 1.0 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) for a "controlled" environment. The MPE level for broadcast facilities that operate on a frequency between 300 MHz and 1500 MHz, primarily UHF TV stations, is determined for an "uncontrolled" environment by dividing the operating frequency in MHz by 1500, and is similarly determined for a "controlled" environment by dividing the operating frequency in MHz by 300.

The predicted emissions of WTTA operating on channel 32 must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WTTA, which will operate on television Channel 32 (578-584 MHz), the MPE is 0.387 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) in an "uncontrolled" environment and 1.937  $\text{mW}/\text{cm}^2$  in a "controlled" environment. The proposed WTTA facility will operate with a maximum ERP of 1000 kW from an elliptically polarized omni-directional transmitting

antenna with a centerline height of 463.4 meters above ground level (AGL). Considering a very conservative vertical plane relative field factor of 0.3, the WTTA facility is predicted to produce a power density at two meters above ground level of  $0.02824 \text{ mW/cm}^2$ , which is 7.29% of the FCC guideline value for an "uncontrolled" environment, and 1.46% of the FCC's guideline value for "controlled" environments (see Appendix A). There are three other DTV and three FM stations located within the relevant proximity of 315 meters. The total percentage of the ANSI value at the proposed site, including the cumulative radiation from all post-transition stations within relevant proximity is 80.21% of the limit for "uncontrolled" environments, and 16.04% of the limit for "controlled" environments. There are no AM stations located within 3.2 kilometers of the proposed site.

### **OCCUPATIONAL SAFETY**

The licensee of WTTA is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WTTA antenna, and is committed to reducing power or ceasing operation during times of maintenance of the RF transmission systems, when necessary, to ensure protection to personnel.

### **SUMMARY**

It is submitted that Bay Television, Inc.'s instant application for a modification of its construction permit, BMPCDT-20091106AER, for WTTA to substitute DTV channel 32 for DTV channel 38 in St. Petersburg, Florida, and to slightly increase its HAAT, as described herein, complies with the requirements of the REPORT AND ORDER in MB Docket No.

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09-159, RM-11557, DA 09-2181, and with the Rules, Regulations and relevant Policies of the Federal Communications Commission. This statement, FCC Form 301, Sections III and III-D, 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: January 28, 2010

