

ENGINEERING REPORT COVERING  
REQUEST FOR CONSTRUCTION PERMIT  
ON BEHALF OF MATTHEW P. BRACCILI  
FOR WHOL 1600 KILOHERTZ  
ALLENTOWN, PENNSYLVANIA

DECEMBER 2014

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SUMMARY

The engineering exhibit of which this statement is part was prepared on behalf of Matthew P. Braccili, hereinafter referred to as “Braccili”, in support of an application for construction permit for WHOL Allentown, Pennsylvania. Braccili is the licensee of WHOL. WHOL is licensed to operate on a frequency of 1600 kilohertz with day power of 500 watts and night power of 56 watts employing a single mode directional antenna system. The purpose of this application is to request a daytime power increase to 1000 watts on the presently authorized frequency of 1600 kilohertz utilizing the presently licensed operating parameters. No changes are proposed for the 56 watt night operation. No other changes are proposed.

### DAYTIME ALLOCATION CONSIDERATIONS

The geographic area encompassed by the daytime allocation study is vast and as a consequence, a conventional allocation map would be hard to read. Accordingly, several maps that provide greater allocation detail in pertinent areas are provided in lieu of a conventional map.

Figure 1 is a co-channel allocation map. The first adjacent channel mapping is provided on Figure 2. Second adjacent channel mapping can be found on Figure 3 and third adjacent channel mapping is plotted on Figure 4.

### TECHNICAL DATA AND EXHIBITS

A polar plot of the proposed WHOL day directional antenna pattern, including horizontal plane radiation tabulations, is shown in Figure 5. A map of the 5 mV/m city of license service contour for the proposed WHOL daytime operation is not provided since the proposed facilities increase radiation in all directions from the licensed WHOL transmitter site. 100% of Allentown, Pennsylvania will continue to receive city grade service during the daytime hours. Figure 6 is a map that plots the proposed WHOL daytime 1000 mV/m contour. The proposed WHOL operation is compliant with Section 73.24(g) of the rules, as the population count is 462 persons within the 1000 mV/m contour.

FIELD MEASUREMENT DATA

All distance to contour calculations used in plotting the various allocation maps were based on M-3 soil conductivity data with three exceptions. Field strength measurement data for station WWRL New York, New York which was used in WWRL construction permit application BMP-20010914AAR for the licensed WWRL facility has been applied to this application. A summary of the measured conductivity data is as follows:

**SUMMARY OF WWRL MEASURED CONDUCTIVITY DATA**

Bearing Cond. Dist. Cond. Dist. Cond. Dist. Cond. Dist.

259 1.5 4.0 7.0 10.0 4.0 16.0 3.0 80.5

In addition, new field measurement data was taken for WHOL from its licensed transmitter site and for WPDC Elizabethtown, Pennsylvania.

All of the field measurement data was taken by John J. Sandt. Mr. Sandt has provided field measurement data for numerous Commission filings for over twenty years. Tables 1 – 13 are tabulations of the measurement data. Figures 7 - 19 are analysis graphs of the measured data. The FCC conductivity reference graph which was employed for the soil measurement conductivity analysis is attached as Figure 20. The meter used for the measurements was a Potomac Instruments model FIM-41, serial number 118, last calibrated November 11, 2009. The meter was compared to similar meters of known calibration and found to be in excellent agreement on all pertinent scales.

### ANSI RADIATION GUIDELINES

A study of the proposed facility was conducted with respect to standards set forth in FCC Bulletin OST Number 65, Edition 97-01, regarding human exposure to radiofrequency radiation. The study was based on data provided in Tables 2 and 3 of Supplement A, “Predicted Distances for Compliance with FCC Limits” and included the contribution of co-located station WTKZ(AM) Allentown, Pennsylvania. Based on Tables 2 and 3, a distance of 2 meters from the tower would have to be observed to achieve ANSI radiofrequency compliance.

When it is necessary for workers to be within the hazard area near the towers, an appropriate power reduction or temporary cessation of broadcasting will be implemented. Access to the towers is prevented by a fence with a locked gate. Signs, warning of a RF hazard, are conspicuously posted at the site.

DECLARATION

The foregoing was prepared by or under the immediate supervision of Charles A. Hecht of Charles A. Hecht & Associates, Inc., Freehold, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. All statements herein are true and correct of his knowledge except such statements made on information and belief, and as to those statements, he believes them to be true and correct under the penalty of perjury.

Respectfully submitted,

/s/

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