



## Appendix B

Signage:



## Appendix A

### Fencing



The foregoing MPE assessment for radio station W294BJ has been prepared by Craig R. Seelig, NCE, PG025682 (FCC Lifetime) contract engineer for Bold Gold Media. The information contained herein is true and complete to the best of my knowledge and belief.



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20-June-2012

tower and 2 m above ground level is calculated to be  $24.2 \mu\text{W}/\text{cm}^2$ . The power density limit for Uncontrolled/General Population Exposure at 948 MHz is  $632 \mu\text{W}/\text{cm}^2$ .  $24.2 \mu\text{W}/\text{cm}^2$  constitutes 3.8% of the  $632 \mu\text{W}/\text{cm}^2$  limit for “Uncontrolled Environments” at this frequency.

There are no other commercial broadcast sites within a radius of one-kilometer of the W294BJ/WPSN (AM) site. Other than what is presented in the forgoing, the nearest fixed source of radio frequency emissions is an ATT cell site located 0.5 km away. Due to its distance from the W294BJ site it is regarded as having no consequence on the results of this evaluation.

### **Conclusion:**

| <b>Contributor</b> | <b>Percentage of “General Public/Uncontrolled Environment” Limit</b> |
|--------------------|----------------------------------------------------------------------|
| W294BJ             | 2.5                                                                  |
| WPSN               | 29.3                                                                 |
| WPON721            | 0.4                                                                  |
| WPON764            | 3.9                                                                  |
| WLF652             | 3.7                                                                  |
| WQDG865            | 3.8                                                                  |
|                    |                                                                      |
| <b>Total</b>       | <b>43.6</b>                                                          |

The sum total of (worst-case) predicted-percentages for all contributors at the W294BJ/WPSN site is 43.6% of the MPE (Maximum Permissible Exposure) Limit for Uncontrolled Areas. This value demonstrates compliance with the FCC maximum permissible uncontrolled/general population RF exposure limits.

In addition to showing that the common transmission site meets the OET Bulletin No. 65 guidelines for a *Safe Center Of Radiation*, it should be noted that access to the transmitting site is restricted<sup>4</sup> and appropriately marked with warning signs<sup>5</sup>. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction of power or shutdown of power shall be taken to ensure that the human exposure to radio frequency electromagnetic fields will not exceed the FCC guidelines.

All of this information thus proves conclusively that this renewal application conforms to the FCC guidelines with respect to OET Bulletin No. 65 (Edition 97-01, August 1997) “**Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields**”.

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<sup>4</sup> See Appendix A

<sup>5</sup> See Appendix B

### 3. **WPON721**

This is a full-time microwave Studio Transmitter Link (STL) operating at 945.000 MHz. Its antenna is located 45.6 meters AGL. The ERP of the station is 151.4 Watts, horizontally polarized.

The “worst case” maximum power density value at a point directly at the base of the tower and 2 m above ground level is calculated to be  $2.66 \mu\text{W}/\text{cm}^2$ . The power density limit<sup>3</sup> for Uncontrolled/General Population Exposure at 945 MHz is  $630 \mu\text{W}/\text{cm}^2$ .  $2.7 \mu\text{W}/\text{cm}^2$  constitutes 0.4% of the  $630 \mu\text{W}/\text{cm}^2$  limit for “Uncontrolled Environments” at this frequency.

### **Adjacent RF Contributors:**

#### 1. **WPON764**

This is a full-time microwave Studio Transmitter Link (STL) operating at 949.000 MHz. Its antenna is located 15.0 meters AGL. The ERP of the station is 125.9 Watts, vertically polarized.

The “worst case” maximum power density value at a point directly at the base of the tower and 2 m above ground level is calculated to be  $24.9 \mu\text{W}/\text{cm}^2$ . The power density limit for Uncontrolled/General Population Exposure at 949 MHz is  $632 \mu\text{W}/\text{cm}^2$ .  $24.9 \mu\text{W}/\text{cm}^2$  constitutes 3.9% of the  $632 \mu\text{W}/\text{cm}^2$  limit for “Uncontrolled Environments” at this frequency.

#### 2. **WPLF652**

This is a full-time microwave Studio Transmitter Link (STL) operating at 951.500 MHz. Its antenna is located 14.0 meters above ground level. The ERP of the station is 100 Watts, vertically polarized.

The “worst case” maximum power density value at a point directly at the base of the tower and 2 m above ground level is calculated to be  $23.2 \mu\text{W}/\text{cm}^2$ . The power density limit for Uncontrolled/General Population Exposure at 800 MHz is  $634 \mu\text{W}/\text{cm}^2$ .  $23.2 \mu\text{W}/\text{cm}^2$  constitutes 3.7% of the  $634 \mu\text{W}/\text{cm}^2$  limit for “Uncontrolled Environments” at this frequency.

#### 3. **WQDG865**

This is a full-time microwave Studio Transmitter Link (STL) operating at 948.000 MHz. Its antenna is located 15.2 meters above ground level. The ERP of the station is 126 Watts, vertically polarized.

The “worst case” maximum power density value at a point directly at the base of the

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<sup>3</sup> As expressed in table 1 of OET Bulletin 65, Appendix A, the Uncontrolled Limit for emissions in the 950 MHz

band is equal to:  $mW / cm^2 = \frac{f}{1500}$

**Environmental Effects Evaluation  
(MPE Certification)  
for  
Translator W294BJ  
(Collocated at WPSN (AM))**

This environmental assessment is provided to demonstrate compliance with the Commissions rules found in Section 1.1305 and Section 1.1307(b) which address allowable radio frequency radiation levels. (Maximum Permissible Exposure or MPE)

One AM broadcast station and one microwave STL station (WPON721) are co-located at this site. Additionally three other microwave STL stations are located on a tower located 25m 195° (True) from the WPSN tower. All of these sources of radio frequency emissions will be included with this Environmental Assessment. The standard power density formula<sup>1</sup> has been used for all calculations. Worst-case conditions have been used for all calculations as follow:

**Co-located RF Contributors:**

**1. WPSN (AM)**

This is a daytime 2.5 kW (nighttime 0.015 kW) commercial AM broadcast station transmitting on 1.590 MHz. The antenna is a 50m vertical monopole and is protected on all sides by a fence.

The “worst case” maximum power density value at 2 meters (horizontal distance) from the antenna/tower is calculated to be 20,875 uW/cm<sup>2</sup>. The power density limit<sup>2</sup> for Uncontrolled/General Population Exposure at 1.59 MHz is 71.20 mW/cm<sup>2</sup>, (71,203 μW/cm<sup>2</sup>). 20,875 μW/cm<sup>2</sup> constitutes 29.3% of the 71,203 μW/cm<sup>2</sup> limit for “Uncontrolled Environments” at this frequency.

**2. W294BJ**

This is a full-time 0.25 kW commercial FM broadcast station translator, transmitting on 106.7 MHz. The antenna is a circularly polarized directional antenna mounted 43m AGL (above ground level).

The “worst case” maximum power density value at a point directly at the base of the tower and 2 m above ground level is calculated to be 5.0 uW/cm<sup>2</sup>. The power density limit for Uncontrolled/General Population Exposure at 106.7 MHz is 200 uW/cm<sup>2</sup>. 5.0 μW/cm<sup>2</sup> constitutes 2.5% of the 630 μW/cm<sup>2</sup> limit for “Uncontrolled Environments” at this frequency.

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$$^1 S = \frac{33.4 * ERP}{R^2}$$

S = Power Density in uW/cm<sup>2</sup>; ERP = Power in Watts. R = Distance in meters.

<sup>2</sup> As expressed in table 1 of OET Bulletin 65 Appendix A, the Uncontrolled Limit is equal to:

$$mW / cm^2 = \frac{180}{f^2}$$