

RF HAZARD STATEMENT
APPLICATION FOR CONSTRUCTION PERMIT (AUXILIARY)
COX RADIO, INC.
FM BROADCAST STATION WJGL(FM)
JACKSONVILLE, FLORIDA

This RF Hazard Statement was prepared on behalf of Cox Radio, Inc., licensee of WJGL(FM), Jacksonville, Florida, in support of an application for construction permit for an auxiliary antenna system. This statement concerns an evaluation of compliance with Section 1.1307(b) of the FCC Rules regarding human exposure to radio frequency (RF) energy.*

The WJGL auxiliary antenna is mounted on Tower No. 3 (center) of the WBOB(AM) (600 kHz) antenna array (FCC Antenna Structure Registration No. 1040350).† The overall tower height is 93.9 m above ground level (AGL). The WBOB antenna array is entirely enclosed by a 7-ft high chain link fence surrounding the perimeter of the property. The base of the center tower of the array (Tower No. 3) is located more than 55 m from the closest point on the perimeter fence.

WBOB is authorized for operation on 600 kHz with a nominal power level of 50 kW (daytime) and 9.7 kW (nighttime) using different directional antennas during daytime and nighttime.‡ Method of Moments modeling of the WBOB daytime and nighttime arrays was conducted to determine the maximum calculated electric and magnetic field levels at any point along the perimeter fence surrounding the property. The results indicate that in any case the electric field from the WBOB daytime or nighttime antenna systems will not exceed 4.3% of the MPE for uncontrolled environments outside of the perimeter fence; and the magnetic field from the WBOB

* See FCC Office of Engineering and Technology Bulletin No. 56 for background information on non-ionizing RF energy of the type discussed here. Internet web reference:

http://www.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet56/oet56e4.pdf

† Geographic coordinates: 30-18-01.0 N / 81-45-33.0 W (NAD83).

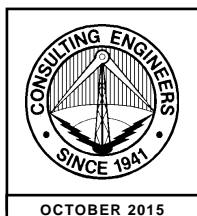
‡ See FCC File No. BMP-20121012ACT (construction permit) and FCC File No. BMML-20150821ACB (application for license to cover construction permit).

daytime or nighttime antenna systems will not exceed 17.2% of the MPE for uncontrolled environments outside of the perimeter fence.

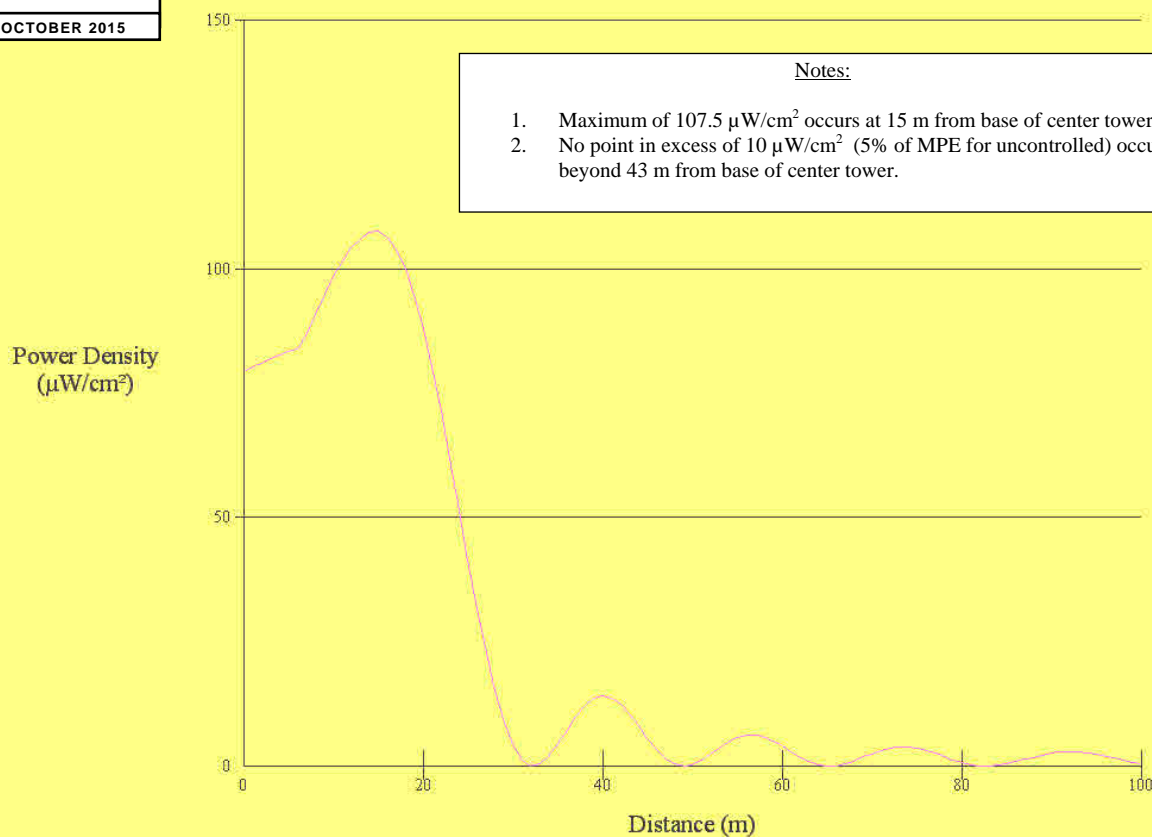
The WJGL auxiliary antenna will operate on Channel 245C0 (96.9 MHz) with a nominal non-directional effective radiated power (ERP) of 100 kW (H & V) (200 kW total ERP). The WJGL antenna is side-mounted on Tower No. 3 with a center of radiation located at 76 m AGL. The WJGL antenna is an RCA model BFC-12 (EPA Type 4) 12-bay full-wave spaced antenna.

An RF exposure analysis conducted using the FCC *FMMModel* Version 2.10 indicates that the RF exposure at 2 m above ground anywhere in the vicinity of the proposed facility will not exceed $108 \mu\text{W}/\text{cm}^2$, which is equivalent to 54% of the FCC exposure limit for general population / uncontrolled environments of $200 \mu\text{W}/\text{cm}^2$. In addition, the results indicate that the 5% exclusion level ($10 \mu\text{W}/\text{cm}^2$) will not be exceeded at any location more than 44 m from the base of Tower No. 3, which distance is entirely within the property boundaries of the WBOB antenna system. The results of the FCC *FMMModel* study are shown in the attached Figure 1.

Based on the above results, the WJGL auxiliary facility is compliant with the 5% exclusion level for general population/uncontrolled environments at any location outside of the perimeter fenced area. Work rules shall be established that no personnel shall enter the fenced perimeter of the array while the WJGL auxiliary antenna is in operation without proper precautions for avoidance of RF levels in excess of the recommended levels; or, the WJGL auxiliary power level shall be reduced or terminated as necessary to prevent human exposure to radio RF energy in excess of FCC specified levels. Therefore the WJGL auxiliary facility is in compliance with the RF exposure requirements set forth in Section 1.1310 of the FCC Rules.



Power Density vs Distance



Office of Engineering and Technology

Distance (m):	100	Antenna Type:	RCA "BFC" (EPA)
Horizontal ERP (W):	100000	Number of Elements:	12
Vertical ERP (W):	100000	Element Spacing:	1
Antenna Height (m):	76		

Update Graph

FCC FM MODEL RESULTS FOR WJGL(FM) AUXILIARY ANTENNA

du Treil, Lundin & Rackley, Inc. Sarasota, Florida