

MINOR CHANGE APPLICATION
DOUBLE O SOUTH CAROLINA CORPORATION
WWNQ (FM) RADIO STATION
CH 232A - 94.3 MHZ - 3.3 KW
FOREST ACRES, SOUTH CAROLINA
June 2005

EXHIBIT B

Radio Frequency Assessment

Since the proposed WWNQ antenna is to be mounted on a tower located atop a building, a study has been made to determine whether this proposal is in compliance with 47 C.F.R. §1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997 ("Bulletin"), regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. This study considers all nearby stations, specifically WARQ and WLTY, and utilizes the appropriate formulas contained in the Bulletin.³

The building on which the WWNQ antenna is mounted is 359 feet tall (26 stories), with a stairwell penthouse and several masts supporting antenna systems mounted above the roof. The tallest mast is 43 feet above the roof level, including an aviation beacon.⁴ The roof is only accessible from a locked stairway leading up from the 26th floor of the building. The 26th floor is restricted to maintenance personnel only. The 26th floor contains rooms housing transmitters, whose antenna systems are located on the roof, and storage areas. This floor is only accessible from the freight elevator. As such, only authorized personnel are allowed access

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- 3) The contribution of the FM facility was calculated using the FM Model program. A single bay EPA dipole antenna was used for calculation purposes, unless otherwise noted
- 4) The WARQ and WLTY antenna systems are side-mounted on small tower sections (30 feet in height) which are attached to a grid platform mounted 10 feet above the roof. The WWNQ antenna is mounted at the top of a 43 foot pole located on the opposite side of the roof from the WARQ and WLTY antenna systems.

to this floor of the building. The closest floor the general public may access is the 25th floor of the building. Therefore, for the purposes of this analysis, the roof level, which is 10.7 meters (35 feet) below the center of radiation of the two existing facilities and existing/proposed WWNQ antenna will be considered a controlled area. Similarly, the floor level of the 26th floor, which is 16.2 meters (53 feet) below the center of radiation, will also be considered a controlled area. The uncontrolled calculations will be made based on the 25th floor, which is 21.7 meters (71.2 feet) below the center of radiation of the antenna systems. Calculations at each point will assume a height of two meters, the height of an average person above the floor.⁵ It is noted that warning signs are posted on the 26th floor and at the stairwell access point to the roof.

The WWNQ antenna system is mounted with its center of radiation 10.7 meters (35.0 feet) above the roof, 16.2 meters (53.0 feet) above the 26th floor and 21.7 meters (71.2 feet) above the 25th floor level of the building. The WWNQ antenna system will operate with an effective radiated power of 3.3 kilowatts in the horizontal and vertical planes (circularly polarized). The WWNQ antenna is a FCC/EPA Type #3 system (two bay halfwave spaced). At two meters, the height of an average person, the WWNQ antenna system will contribute 0.2590 mw on the roof (25.9% of the controlled limit), 0.0972 mw on the 26th floor (9.7% of the controlled limit) and 0.0505 mw on the 25th floor (25.3% of the uncontrolled limit).

The WARQ antenna system is mounted with its center of radiation 10.7 meters (35.0 feet) above the roof, 16.2 meters (53.0 feet) above the 26th floor and 21.7 meters (71.2 feet) above the

5) These calculations do not take into consideration the attenuating factors of the actual floors themselves, which will substantially diminish the RF levels on the 26th and 25th floors. Therefore, the calculations are considered worst case.

25th floor level of the building. The WARQ antenna system operates with an effective radiated power of 2.8 kilowatts in the horizontal and vertical planes (circularly polarized). The WARQ antenna is a FCC/EPA Type #6 system (two bay fullwave spaced).⁶ At two meters, the height of an average person, the WARQ antenna system will contribute 0.3233 mw on the roof (32.3% of the controlled limit), 0.1206 mw on the 26th floor (12.1% of the controlled limit) and 0.0631 mw on the 25th floor (31.6 % of the uncontrolled limit).

The WLTY antenna system is mounted with its center of radiation 10.7 meters (35.0 feet) above the roof, 16.2 meters (53.0 feet) above the 26th floor and 21.7 meters (71.2 feet) above the 25th floor level of the building. The WLTY antenna system operates with an effective radiated power of 3.3 kilowatts in the horizontal and vertical planes (circularly polarized). The WLTY antenna is a FCC/EPA Type #9 system (two bay fullwave spaced).⁷ At two meters, the height of an average person, the WLTY antenna system will contribute 0.3822 mw on the roof (38.2% of the controlled limit), 0.1431 mw on the 26th floor (14.3% of the controlled limit) and 0.0745 mw on the 25th floor (37.3 % of the uncontrolled limit).

Combining the contributions of WWNQ, WARQ and WLTY, the contributions of the stations on the controlled roof are 96.4% of the limit, on the controlled 26th floor are 36.1% and on the uncontrolled 25th floor are 94.2%. Since this level for both controlled and uncontrolled

6) The WARQ antenna system is a Shively Labs 6813 two bay, which is a low power version of the 6810 system.

7) The WLTY antenna system is a Dielectric DCR-H two bay, which is a low power version of the DCR-C system. It is further noted that there is an outstanding permit to upgrade and relocate WLTY to a new site, thus removing WLTY as a contributor.

environments is below the 100% limit defined by the Commission, the proposed WWNQ antenna system is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, Double O reiterates that warning signs are posted at the stair well access to the roof, at the roof access door and on the 26th floor, which warn of potential radio frequency radiation hazards at the site. In addition, Double O will reduce the power of the proposed facility or cease operation, in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower or antenna from radio frequency radiation in excess of FCC guidelines. Based on the above factors, this proposal is categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.