

**AMEND BPFT-20100402ABS**  
**SOUTHERN COMMUNICATIONS CORPORATION**  
**W264BM FM TRANSLATOR**  
**CH 228D - 93.5 MHZ - 0.250 KW**  
**BECKLEY, WEST VIRGINIA**  
**April 2010**

**EXHIBIT D**

**Radio Frequency Assessment**

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 nearby stations, specifically the co-located WIWS, WWNR and W266AZ, utilizes the appropriate formulas contained in the OET Bulletin.<sup>1</sup>

The proposed W264BM antenna system is to be mounted with its center of radiation 120.4 meters (395.0 feet) above the ground at the existing tower location and will operate with an effective radiated power of 0.250 kilowatt in the horizontal and vertical planes (circularly polarized). At 2.0 meters above the ground at the base of the tower, the height of an average person, the W264BM antenna system will contribute 0.0007 mw/cm<sup>2</sup>.<sup>2</sup> Based on exposure limitations for a controlled environment, <0.1% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 0.4% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

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- 1) The FMModel Program was used for all calculations for the FM station contributions. The EPA single bay dipole antenna was used unless otherwise noted.
  - 2) This level of field occurs at 32.0 meters out from the base of the tower and is considered worst case.

The authorized W266AZ antenna system is mounted with its center of radiation 15.0 meters (49.2 feet) above the ground at the existing tower location and operates with an effective radiated power of 0.010 kilowatt in the horizontal and vertical planes (circularly polarized). At 2.0 meters above the ground at the base of the tower, the height of an average person, the W266AZ antenna system contributes  $0.0024 \text{ mw/cm}^2$ .<sup>3</sup> Based on exposure limitations for a controlled environment, 0.2% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 1.2% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

WWNR operates on 620 kHz with a nominal power of 5.0 kilowatts using a  $90.8^\circ$  radiator. A fence is installed a minimum of 3.0 meters out from the base of the tower. At this distance, WWNR delivers an electric field of 50.8 V/m and 0.577 A/m at the fence perimeter. As WWNR operates below 1340 kHz, the levels for both controlled and uncontrolled environments are the same. WWNR contributes 8.3% of the maximum electric field for controlled environments at this distance, and 35.4% of the magnetic field. Since the magnetic level field is highest, it will be considered worst case for WWNR.

WIWS operates on 1070 kHz with a nominal power of 10.0 kilowatts using a  $156.6^\circ$  radiator. A fence is installed a minimum of 3.0 meters out from the base of the tower. At this distance, WIWS delivers an electric field of 263.8 V/m and 0.354 A/m at the fence perimeter. As WIWS operates below 1340 kHz, the levels for both controlled and uncontrolled

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3) This level of field occurs at 4.0 meters out from the base of the tower and is considered worst case.

environments are the same. WIWS contributes 43.0% of the maximum electric field for controlled environments at this distance, and 21.7% of the magnetic field. Since the electric level field is highest, it will be considered worst case for WIWS.

Combining the contributions of W264BM, W266AZ, WWNR and WIWS, a total of less than 80.0% of the field for uncontrolled exposure is reached 2.0 meters above the ground at the fence perimeter. Since this level for controlled and uncontrolled environments is below the limit as defined by the Commission, the proposed W264BM facility is believed to be in compliance with the radio frequency radiation exposure limits, as required by the Federal Communications Commission. Further, SCC will post warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. Additionally, SCC will reduce the power of the 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.