

MINOR CHANGE APPLICATION
NEW AUXILIARY FM ANTENNA
RADIO LICENSE HOLDING SRC LLC
WWWQ (FM) RADIO STATION
CH 259C0 - 99.7 MHZ - 48.0 KW
ATLANTA, GEORGIA
September 2015

EXHIBIT B

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 all nearby contributing stations, specifically the proposed WWWQ¹ and WNNX auxiliary antenna systems, FM translators W275BK and W233BF, and television stations WYGA-LD and WIRE-CA, and utilizes the appropriate formulas contained in the OET Bulletin.²

The proposed WWWQ auxiliary antenna system will be mounted with its center of radiation 302.5 meters (992.4 feet) above the ground at the existing tower location and will operate with an effective radiated power of 48.0 kilowatts 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 WWWQ auxiliary antenna system will contribute 0.0214 mw/cm².³ Based

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- 1) SRC is also submitting applications for a second new auxiliary antenna system for WWWQ and for a new auxiliary antenna system for WNNX to be co-located on this same tower.
 - 2) The FMModel Program was used for all calculations for the FM station contributions. The EPA single bay dipole antenna was used unless otherwise noted.
 - 3) This level of field occurs at 81.0 meters out from the base of the tower and is considered worst case.

on exposure limitations for a controlled environment, 2.1% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 10.7% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The second proposed WWWQ auxiliary antenna system will be mounted with its center of radiation 237.8 meters (780.2 feet) above the ground at the existing tower location and will operate with an effective radiated power of 15.0 kilowatts 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 WWWQ auxiliary antenna system will contribute 0.0108 mw/cm^2 .⁴ Based on exposure limitations for a controlled environment, 1.1% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 5.4% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The proposed WNNX auxiliary antenna system will be mounted with its center of radiation 323.1 meters (1060.0 feet) above the ground at the existing tower location and will operate with an effective radiated power of 5.9 kilowatts 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 WNNX auxiliary antenna system will contribute 0.0023 mw/cm^2 .⁵ 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.

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- 4) This level of field occurs at 64.0 meters out from the base of the tower and is considered worst case.
- 5) This level of field occurs at 86.0 meters out from the base of the tower and is considered worst case.

The authorized W275BK antenna system is mounted with its center of radiation 285.0 meters (935.0 feet) above the ground at the existing tower location and operates with an effective radiated power of 0.160 kilowatts (160 watts) 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, W275BK contributes 0.00008 mw/cm^2 .⁶ 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, <0.1% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The authorized W233BF antenna system is mounted with its center of radiation 307.0 meters (1,007.2 feet) above the ground at the existing tower location and operates with an effective radiated power of 0.185 kilowatts (185 watts) 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, W233BF contributes 0.00007 mw/cm^2 .⁷ 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, <0.1% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower

The WYGA-LD Channel 16 antenna system is mounted with its center of radiation 280.0 meters (918.6 feet) above the ground and operates with an effective radiated power of 4.0 kilowatts in the horizontal plane. At 2.0 meters above the ground at the base of the tower, the

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- 6) This level of field occurs at 79.0 meters out from the base of the tower and is considered worst case.
- 7) This level of field occurs at 82.0 meters out from the base of the tower and is considered worst case.

height of an average person, the WYGA-LD antenna system contributes 0.0007 mw/cm^2 . 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, 0.2% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The WIRE-CA Channel 40+ antenna system is mounted with its center of radiation 243.8 meters (799.9 feet) above the ground and operates with an effective radiated power of 55.0 kilowatts in the horizontal plane. As denoted in OET Bulletin #65, Supplement A, Page 31, the typical UHF antenna system has a downward radiated field of 0.1. As such, the calculations of the WIRE-CA antenna are based on a power of 0.55 kilowatt (550 watts). At 2.0 meters above the ground at the base of the tower, the height of an average person, the WIRE-CA antenna system contributes 0.0002 mw/cm^2 . Based on exposure limitations for a controlled environment, less than 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, less than 0.1% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

Combining the contributions of the two proposed WWWQ auxiliary antennas, the proposed WNNX auxiliary antenna, W275BK, W233BF, WYGA-LD and WIRE-CA, a total of less than 18.0% of the uncontrolled limit is reached 2.0 meters above the ground at the base of the tower. Since this level for uncontrolled environments is less than the 100% limit defined by the Commission, the proposed WWWQ auxiliary antenna system facility is believed to be in

compliance with the radio frequency radiation exposure limits, as required by the Federal Communications Commission. Further, SRC will post warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, SRC 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.