

MINOR CHANGE APPLICATION
APEX BROADCASTING, INC.
WCSQ (FM) RADIO STATION
CH 223C0 - 92.5 MHZ - 56.0 KW (DA)
MONCK'S CORNER, SOUTH CAROLINA
June 2005

EXHIBIT A

Radio Frequency Assessment

Since the proposed WCSQ antenna is to be mounted on an existing tower on which there are numerous FM and TV antennas, 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 FM stations WSCI, WSUY and WAVF and TV stations WCIV, WCIV-DT, WCSC-TV, WCSC-DT, WITV and WITV-DT, and utilizes the appropriate formulas contained in the OET Bulletin.³

The WCSQ antenna system will be mounted with its center of radiation 538 meters (1,766 feet) above the ground at the proposed tower location and will operate with an effective radiated power of 56.0 kilowatts in the horizontal and vertical planes (circularly polarized). At two meters, the height of an average person, above the ground at the base of the existing tower, the WCSQ antenna system will contribute 0.0078 mw.⁴ Based on exposure limitations for a

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- 3) The contributions of the FM facilities were calculated using the FM Model program. A single bay EPA dipole antenna was used for calculation purposes, unless otherwise stated.
- 4) This level of field occurs at 144 meters out from the base of the tower and is considered worst case.

controlled environment, 0.8% of the allowable limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 3.9% of the limit is reached at two meters above the ground at the base of the tower.

The WAVF antenna system will be mounted with its center of radiation 538 meters (1,766 feet) above the ground at the proposed tower location and will operate with an effective radiated power of 100.0 kilowatts in the horizontal and vertical planes (circularly polarized). At two meters, the height of an average person, above the ground at the base of the existing tower, the WAVF antenna system will contribute 0.0139 mw.⁵ Based on exposure limitations for a controlled environment, 1.4% of the allowable limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 7.0% of the limit is reached at two meters above the ground at the base of the tower.

The WSUY antenna system is mounted with its center of radiation 538 meters (1,766 feet) above the ground at the tower location and operates with an effective radiated power of 100.0 kilowatts in the horizontal and vertical planes (circularly polarized). At two meters, the height of an average person, above the ground at the base of the existing tower, the WSUY antenna system contributes 0.0139 mw.⁶ Based on exposure limitations for a controlled environment, 1.4% of the allowable limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 7.0% of the limit is reached at two meters above the ground at the base of the tower.

5) This level of field occurs at 144 meters out from the base of the tower and is considered worst case.

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The WSCI antenna system is mounted with its center of radiation 414 meters (1,358 feet) above the ground at the proposed tower location and operates with an effective radiated power of 100.0 kilowatts in the horizontal and vertical planes (circularly polarized). At two meters, the height of an average person, above the ground at the base of the existing tower, the WSCI antenna system contributes 0.0237 mw.⁷ Based on exposure limitations for a controlled environment, 2.4% of the allowable limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 11.9% of the limit is reached at two meters above the ground at the base of the tower.

The WCIV Channel 4 antenna system is mounted with its center of radiation 596 meters (1,956 feet) above the ground at the existing tower location and operates with an effective radiated power of 100.0 kilowatts in the horizontal plane. At two meters, the height of an average person, above the ground at the base of the tower, the WCIV antenna system contributes 0.0057 mw. Based on exposure limitations for a controlled environment, 0.6% of the allowable ANSI limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 2.8% of the ANSI limit is reached at two meters above the ground at the base of the tower.

The WCSC-TV Channel 5 antenna system is mounted with its center of radiation 596 meters (1,956 feet) above the ground at the existing tower location and operates with an effective radiated power of 100 kilowatts in the horizontal plane. At two meters, the height of

7) This level of field occurs at 110.4 meters out from the base of the tower and is considered worst case.

an average person, above the ground at the base of the tower, the WCSC antenna system contributes 0.0057 mw. Based on exposure limitations for a controlled environment, 0.6% of the allowable ANSI limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 2.8% of the ANSI limit is reached at two meters above the ground at the base of the tower.

The WITV Channel 7 antenna system is mounted with its center of radiation 560 meters (1,838 feet) above the ground at the existing tower location and operates with an effective radiated power of 316 kilowatts in the horizontal and vertical planes (circularly polarized). At two meters, the height of an average person, above the ground at the base of the tower, the WITV antenna system contributes 0.0407 mw. Based on exposure limitations for a controlled environment, 4.1% of the allowable ANSI limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 20.3% of the ANSI limit is reached at two meters above the ground at the base of the tower.

The authorized WCIV-DT Channel 34 antenna system will be mounted with its center of radiation 520 meters (1,706 feet) above the ground at the existing tower location and will operate with an effective radiated power of 630 kilowatts in the horizontal plane.⁸ At two meters, the height of an average person, above the ground at the base of the tower, the WCIV-DT TV antenna system will contribute 0.0314 mw. Based on exposure limitations for a controlled environment, 1.6% of the allowable ANSI limit is reached at two meters above the

8) WCIV-DT also has an operating STA facility at the same height as the authorized permit, but with a lower effective radiated power. Therefore, the permitted facility was reviewed for RF exposure issues as a worst case contributor.

ground at the base of the tower. For uncontrolled environments, 8.0% of the ANSI limit is reached at two meters above the ground at the base of the tower.

The licensed WCSC-DT Channel 47 antenna system is mounted with its center of radiation 520 meters (1,706 feet) above the ground at the existing tower location and operates with an effective radiated power of 1,000 kilowatts in the horizontal plane. At two meters, the height of an average person, above the ground at the base of the tower, the WCSC-DT TV antenna system contributes 0.0498 mw. Based on exposure limitations for a controlled environment, 2.2% of the allowable ANSI limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 11.2% of the ANSI limit is reached at two meters above the ground at the base of the tower.

The licensed WITV-DT Channel 49 antenna system is mounted with its center of radiation 520 meters (1,706 feet) above the ground at the existing tower location and operates with an effective radiated power of 400 kilowatts in the horizontal plane. At two meters, the height of an average person, above the ground at the base of the tower, the WITV-DT TV antenna system contributes 0.0199 mw. Based on exposure limitations for a controlled environment, 0.9% of the allowable ANSI limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 4.4% of the ANSI limit is reached at two meters above the ground at the base of the tower.

Combining the contributions of the WCSQ, WAVF, WSUY, WSCI, WCSC-TV, WCSC-DT, WCIV, WCIV-DT, WITV and WITV-DT, a total of 79.3% of the level is reached at two meters above the ground at the base of the tower for uncontrolled environments. Since this level is below the 100% limit defined by the Commission, the proposed WCSQ facility is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, Apex will insure warning signs are posted in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, Apex 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.