

MINOR CHANGE APPLICATION
ST. THOMAS SEMINARY
W226AG FM TRANSLATOR STATION
CH 226D - 93.1 MHZ - 0.009 KW
HAMDEN, CONNECTICUT
March 2012

EXHIBIT C

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 WKCI-FM¹, and utilizes the appropriate formulas contained in the OET Bulletin.²

The proposed W226AG antenna system will be mounted with its center of radiation 7.6 meters (25.0 feet) above the ground at the tower location and operate with an effective radiated power of 0.009 kilowatt (9 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, the proposed W226AG antenna system will contribute 0.0114 mw/cm².³ Based on exposure limitations for a controlled environment, 1.1% of the allowable ANSI limit is reached at 2.0

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- 1) In addition to the WKCI-FM main antenna located on an adjacent tower, WKCI-FM also has a co-located auxiliary antenna. The auxiliary antenna is located farther down on the tower, but is licensed to operate with less power and has a lesser contribution than the main. Since the WKCI-FM main facility and auxiliary facility will not be operating simultaneously, the WKCI-FM main is considered herein as worst case.
 - 2) The contributions of the FM stations were calculated with the FMModel program. The EPA single bay dipole antenna was used for calculations unless otherwise noted.
 - 3) This level occurs at 2.0 meters out from the base of the tower and is considered worst case.

meters above the ground at the base of the tower. For uncontrolled environments, 5.7% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The authorized WKCI-FM antenna system is mounted with its center of radiation 185.0 meters (607.0 feet) above the ground at the tower location and operates with an effective radiated power of 12.0 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 WKCI-FM antenna system contributes 0.0144 mw/cm^2 .⁴ Based on exposure limitations for a controlled environment, 1.4% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 7.2% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

Combining the contributions of W226AG and WKCI-FM, a total of 12.9% is reached at 2.0 meters above the ground at the base of the existing tower. Since this level for uncontrolled environments is below the limit defined by the Commission, the proposed W226AG facility is believed to be in compliance with the radio frequency radiation exposure limits, as required by the Federal Communications Commission. Further, STS will post warning signs in the vicinity of the tower, warning of potential radio frequency radiation hazards at the site. In addition, STS will reduce the power of the proposed facility or cease operation, in cooperation and coordination with other users, as necessary, to protect persons having access to the site, tower, or antenna from radio frequency radiation in excess of FCC guidelines.

4) This level occurs at 49.0 meters out from the base of the tower and is considered worst case.