

**MINOR CHANGE APPLICATION**  
**K LICENSEE, INC.**  
**W17CD LPTV STATION**  
**CH 17- (488-494 MHZ) - 75.0 KW (DA)**  
**STAMFORD, CONNECTICUT**  
**October 2006**

**EXHIBIT B**

**Radio Frequency Assessment**

Since the proposed W17CD facility is to be co-located with an FM translator and an existing and proposed LPTV station 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 contributing stations, specifically W276AV, W27CD, and a proposed companion digital station associated with W17CD on Channel 34 ("Channel 34 DTV")<sup>1</sup>, and utilizes the appropriate formulas contained in the OET Bulletin.<sup>2</sup>

The location of the proposed W17CD antenna system is an existing building located at 44 Strawberry Hill Avenue in Stamford, Connecticut. The building is 180 feet tall, with an elevator penthouse extending 20 feet above the roof. Attached to the elevator penthouse are antenna mounts that allow the existing antenna systems to extend above the penthouse roof (even farther above the building roof). Access to the roof is secured with a locked door on the floor below the

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- 1) KLI is submitting an application for a companion digital channel for W17CD. The proposed Channel 34 digital facility was listed as a singleton in DA 06-1748, released August 31, 2006.
  - 2) The contribution of the FM facility was calculated using the FMModel program. A single bay EPA dipole antenna was used for calculation purposes.

roof. There are also RF warning signs located at the doorway. Only persons familiar with working in RF environments are allowed access to the roof. As such, calculations of exposure levels on the roof will be based on controlled environments. The uncontrolled exposure calculations will be made on the closest occupied floor, which is located 13 feet below the building roof.

The proposed W17CD Channel 17 low power television antenna system will be mounted with its center of radiation 8.8 meters (29.0 feet) above the building roof and will operate with an effective radiated power of 75.0 kilowatts in the horizontal plane. As denoted in OET Bulletin #65, Supplement A, Page 31, the typical UHF antenna system has a downward radiation field of 0.1. As such, the W17CD antenna system radio frequency radiation calculations were made based on an effective radiated power of 0.75 kilowatt. At 2.0 meters above the roof, the height of an average person, the proposed W17CD antenna system will contribute  $0.3360 \text{ mw/cm}^2$ . Based on exposure limitations for a controlled environment, 20.7% of the allowable ANSI limit is reached at 2.0 meters above the roof. The proposed W17CD antenna will be mounted 12.8 meters (42.0 feet) above the nearest occupied floor. Applying the same downward power adjustment, the W17CD antenna will contribute  $0.1322 \text{ mw/cm}^2$  on the occupied floor. The system will contribute 40.9% of the uncontrolled limit on the occupied floor.

The authorized W27CD Channel 27 low power television antenna system is mounted with its center of radiation 10.7 meters (35.0feet) above the building roof and operates with an effective radiated power of 17.4 kilowatts in the horizontal plane. As denoted in OET Bulletin #65, Supplement A, Page 31, the typical UHF antenna system has a downward radiation field of 0.1. As such, the W27CD antenna system radio frequency radiation calculations were

made based on an effective radiated power of 0.174 kilowatt. At 2.0 meters above the roof, the height of an average person, the existing W27CD antenna system contributes  $0.0476 \text{ mw/cm}^2$ . Based on exposure limitations for a controlled environment, 2.6% of the allowable ANSI limit is reached at 2.0 meters above the roof. The existing W27CD antenna is mounted 14.6 meters (48.0 feet) above the nearest occupied floor. Applying the same downward power adjustment, the W27CD antenna contributes  $0.0227 \text{ mw/cm}^2$  on the occupied floor. The system will contribute 6.2% of the uncontrolled limit on the occupied floor.

The proposed Channel 34 DTV antenna system will be mounted with its center of radiation 7.6 meters (25.0 feet) above the building roof and will operate with an effective radiated power of 0.5 kilowatt in the horizontal plane. As denoted in OET Bulletin #65, Supplement A, Page 31, the typical UHF antenna system has a downward radiation field of 0.1. As such, the Channel 34 DTV antenna system radio frequency radiation calculations were made based on an effective radiated power of 0.005 kilowatt. At 2.0 meters above the roof, the height of an average person, the proposed Channel 34 DTV antenna system contributes  $0.0021 \text{ mw/cm}^2$ . Based on exposure limitations for a controlled environment, 0.1% of the allowable ANSI limit is reached at 2.0 meters above the roof. The proposed Channel 34 DTV antenna will be mounted 11.6 meters (38.0 feet) above the nearest occupied floor. Applying the same downward power adjustment, the Channel 34 DTV antenna will contribute  $0.0007 \text{ mw/cm}^2$  on the occupied floor. The system will contribute 0.2% of the uncontrolled limit on the occupied floor.

The W276AV antenna system is mounted with a center of radiation of 9.4 meters (31.0 feet) above the roof and operates with an effective radiated power of 0.003 kilowatt in the



horizontal and vertical planes (circularly polarized).<sup>3</sup> At 2.0 meters above the roof, the height of an average person, the W276AV translator antenna system contributes 0.0022 mw/cm<sup>2</sup>.<sup>4</sup> Based on exposure limitations for a controlled environment, 0.2% of the allowable limit is reached at 2.0 meters above the roof. For uncontrolled environments, also at 2.0 meters above the roof, 1.1% of the limit is reached.

Combining the contributions of W17CD, W27CD, Channel 34 DTV and W276AV, a total of 23.6% of the controlled limit is reached at 2.0 meters above the roof, and 48.4% of the uncontrolled limit on the highest occupied floor of the building. Since these levels for controlled and uncontrolled environments is well below the 100% limit defined by the Commission, the proposed W17CD facility is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, KLI will ensure warning signs are posted in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, KLI 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.

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3) Due to the extremely low power of the translator, calculations for controlled and uncontrolled will be made at the roof and considered worst case.

4) This level of field occurs at 2.0 meters out from the base of the tower and is considered worst case.