

## RF HAZARD STATEMENT

TELEVISION STATION WMBC-TV  
NEWTON, NEW JERSEY  
CHANNEL 18 250 KW (H), 75 KW (V) (MAX-DA) 520 M HAAT

This radio frequency (RF) hazard statement was prepared for television station WMBC-TV concerning an evaluation of compliance with Section 1.1307(b) of the FCC Rules\* regarding human exposure to RF energy.†

WMBC-TV plans to employ the shared master antenna mounted at the top of the One World Trade Center (1WTC) building in New York. (See FCC Antenna Structure Registration No. 1263701). The 1WTC is a multi-use site supporting the transmitting antennas of various broadcast and non-broadcast facilities. However the proposed WMBC-TV facility will be a negligible contributor of RF energy at ground level, and at accessible areas of the building rooftop, which is considered to be a controlled environment for RF hazard evaluation purposes.

The following table summarizes the technical details for the proposed WMBC-TV main facility considered in this analysis:

Call Sign / Mode	Channel / Frequency	Maximum Effective Radiated Power (kW)	Antenna Radiation Center Height Above Ground (meters)	Transmitting Antenna Make and Model / Polarization
WMBC-TV / digital	18 / 494-500 MHz	250 (H); 75 (V); 325 (Total)	526.1	RFS, PEP40E / elliptical

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\* See Rules of the United States Federal Communications Commission (FCC), generally at Title 47 of the Code of Federal Regulations (Telecommunication).

† See FCC Office of Engineering and Technology Bulletin No. 56 for background information on non-ionizing RF energy of the type discussed here. Internet web reference:

[http://www.fcc.gov/Bureaus/Engineering\\_Technology/Documents/bulletins/oet56/oet56e4.pdf](http://www.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet56/oet56e4.pdf)

Based on Section 73.1310 of the FCC Rules, the pertinent maximum permissible exposure (MPE) limits for the subject station are as follows:

Call Sign	Frequency (MHz)	MPE Limits for Controlled and Uncontrolled Environments (uW/cm <sup>2</sup> )	MPE for Respective 5% Exclusion Levels (uW/cm <sup>2</sup> )
WMBC-TV	497	1656.7 (controlled) 331.3 (uncontrolled)	82.83 (controlled) 16.56 (uncontrolled)

Also indicated in the table above are the 5% MPE levels below which the RF energy level contributions are considered to be negligible. Those licensees whose transmitters produce RF energy levels in excess of 5.0% of the applicable exposure limit at an accessible location are considered to be significant contributors and would share in the responsibility to bring the RF exposure levels into compliance in a multiple user environment.

The subject facilities were evaluated for RF exposure at 2-m above ground level (AGL) using the procedures outlined in OET Bulletin No. 65, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*<sup>‡</sup>, with the following results:

Call Sign	Distance (m)	Assumed Antenna Downward Relative Field Factor <sup>§</sup>	Calculated Power Density (uW/cm <sup>2</sup> )	Percent of Uncontrolled MPE (%)
WMBC-TV	526.1	0.20	1.58	<b>0.48</b>

As indicated above, the exposure to RF energy at 2-m above ground level will not exceed 0.48% of the FCC limit for uncontrolled (general population) exposure.

With respect to the building itself, the distance to the roof from the center of the antenna is 119 m. The distance to the roof antenna platform closest to the antenna

<sup>‡</sup> Federal Communications Commission, Office of Engineering and Technology, OET Bulletin No. 65, Edition 97-01, August, 1997.

<sup>§</sup> This is a conservative estimate of downward relative field factor.

is 99 m. Power density calculations were conducted at 2-m above the closest platform level based on the following conservative assumptions, with the following results:

Call Sign	Distance (m)	Assumed Antenna Downward Relative Field Factor	Calculated Power Density (uW/cm <sup>2</sup> )	Percent of Controlled MPE (%)
WMBC-TV	99	0.20	46.15	<b>2.79</b>

As indicated above, the exposure to RF energy at 2-m above the closest roof platform level will not exceed 2.79% of the FCC limit for controlled (occupational) exposure.

The management of the 1WTC has established policies and procedures that strictly control access to the rooftop areas of the building. The strict work rules in place concerning access to certain areas of the 1WTC will continue; and the applicant shall cooperate in implementation of the work rules. Therefore, the proposed WMBC-TV main facility complies with the FCC limits for human exposure to RF energy and it is categorically excluded from environmental processing.