

RF HAZARD STATEMENT
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
TELEVISION STATION WPXN-TV
NEW YORK, NEW YORK
CHANNEL 34 106 KW (H & V) 520 M HAAT

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

WPXN-TV plans to employ a shared master antenna to be 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 WPXN-TV facility will be a negligible contributor of RF energy at ground level and on accessible areas of the building rooftop.

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

Call Sign / Mode	Channel / Frequency	Average Effective Radiated Power (kW)	Antenna Radiation Center Height Above Ground (meters)	Transmitting Antenna Make and Model / Polarization
WPXN-TV / digital	34 / 590-596 MHz	106 (H&V); 212 (Total)	526.1	RFS, PEP40E / circular

* 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

The elevation pattern employed for the above listed antenna is included with the instant application for modification of construction permit.

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 for General Population/Uncontrolled (GP/U) Exposure ($\mu\text{W}/\text{cm}^2$)	MPE for <u>5% Exclusion Level</u> for GP/U Exposure ($\mu\text{W}/\text{cm}^2$)
WPXN-TV	593	359.3	17.97

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*[‡], with the following results:

Call Sign	Distance (m)	Assumed Antenna Downward Relative Field Factor [§]	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of GP/U MPE (%)
WPXN-TV	526.1	0.20	1.03	0.26

As indicated above, the exposure to RF energy at 2-m above ground level will not exceed 0.26% of the FCC limit for general population / uncontrolled exposure.

[‡] Federal Communications Commission, Office of Engineering and Technology, OET Bulletin No. 65, Edition 97-01, August, 1997.

[§] This is a conservative estimate of downward relative field factor.

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 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 ²)	Percent of GP/U MPE (%)
WPXN-TV	99	0.15	16.9	4.3

As indicated above, the exposure to RF energy at 2-m above the closest roof platform level will not exceed 4.3% of the FCC limit for general population / uncontrolled exposure.

The management of the 1WTC has established policies and procedures that strictly control access to certain areas of the building where there may be RF exposure levels in excess of FCC limits. 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 WPXN-TV main facility complies with the FCC limits for human exposure to RF energy and it is categorically excluded from environmental processing.

^{**} This is a conservative estimate of the relative field factor for angles from 90° to 63° degrees below the horizontal.