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WSKG PUBLIC TELECOMMUNICATIONS COUNCIL
BINGHAMTON, NEW YORK

PERMITTEE OF

WSKA(TV) CHANNEL 30

CORNING, NEW YORK

FACILITY ID # 78908

FCC FILE No. BPET-19960126KE

MINOR CHANGE

APPLICATION TO MODIFY EXISTING

CONSTRUCTION PERMIT TO SPECIFY DTV OPERATION

ENGINEERING EXHIBIT 36

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ENVIRONMENTAL CONSIDERATIONS

The instant application is excluded under 1.1306. Using the procedures outlined in OET Bulletin 65, Edition 97-01 and specifically Equation 10, I have evaluated the RFR energy from the antenna system of proposed WSKA-DT as follows:

The proposed WSKA -DT is one of several TV and FM broadcast antennas at the station location required to be considered by 47 CFR 1.1307(b).

WSKA-DT

WSKA-DT, Channel 30, is proposing to utilize an average ERP of 50 kilowatts with horizontal polarization. The WSKA-DT transmitting antenna is also a medium gain unit with an elevation power gain of 22X top mounted with a base approximately 98 meters up the tower. Because of the elevation gain, the ERP at angles departing +/- 10 degrees from the horizon is attenuated by a minimum of 20 dB. For occupational/controlled environment (1.9 mW/cm^2 at 569 MHz) and utilizing Equation 10 of OET Bulletin 65 and allowing for 20 dB at steep angles, the required physical separation is 3 meters. For general population/uncontrolled environment (0.38 mW/cm^2), the required physical spacing is 6.3 meters. Since the bottom of the antenna is approximately 98 meters above the ground, the height of the structure limits the possible excessive radiation values to at least 91.7 meters above the ground. Again using Equation 10 of OET Bulletin 65, and using the total average RF power corrected for steep

angles, the *actual RF level at 2 meters above the ground from WSKA-DT is 2.1 uW/cm^2 or 0.55 % of the total allowable at 569 MHz.*

Therefore the total calculated RFR levels at the base of the proposed tower contributed by the WSKA-DT proposed operation will *be no more than 0.6 %* of the total and well below the allowable limits of OET Bulletin 65 for the general public/uncontrolled environment. **The addition of WSKA-DT contributes less than 1 % of the total RFR energy at ground level at this multiple use site.**

W21BW

W21BW, Channel 21, is operating with a visual peak ERP of 2.4 kilowatts (1.75 kW total average power) with horizontal polarization. The W21BW transmitting antenna is a medium gain unit with a base approximately 90 meters up the tower. Because of the transmitting antenna elevation gain, the ERP at angles departing +/- 10 degrees from the horizon is attenuated by a minimum of 10 dB. For occupational/controlled environment (1.71 mW/cm^2 at 513 MHz) and utilizing Equation 10 of OET Bulletin 65 and allowing for 10 dB at steep angles, the required physical separation is 1.9 meters. For general population/uncontrolled environment (0.342 mW/cm^2), the required physical spacing is 4.2 meters. Since the bottom of the antenna is approximately 90 meters above the ground, the height of the structure limits the possible excessive radiation values to at least 85.8 meters above the ground. Again using Equation 10 of OET Bulletin 65, and using the total average RF power corrected for steep angles, the *actual RF level at 2 meters above the ground from W21BW is 0.74 uW/cm^2 or 0.22 % of the total allowable at 513 MHz...*

Therefore the total calculated RFR levels at the base of the proposed tower contributed by the W21BW operation, will *be no more than 0.74 %* of the total for the site and well below the allowable limits of OET Bulletin 65 for the general public/uncontrolled environment. **W21BW contributes less than 5 % of the total RFR energy at ground level at this multiple use site.**

WENY-FM

WENY-FM is licensed with an ERP of 1.2 kilowatts with circular polarization. Assuming that the WENY-FM transmitting antenna is a 1 bay full wavelength spaced unit with an elevation power gain of 0.5x side mounted with a base approximately 95 meters up the tower. Because of the elevation gain, the ERP at angles departing +/- 30 degrees from the horizon is attenuated by a minimum of 3 dB. For occupational/controlled environment (1.0 mW/cm^2 at FM frequencies) and utilizing Equation 10 of OET Bulletin 65 and allowing for 3 dB at steep angles, the required physical separation is 6.33 meters. For general population/uncontrolled environment (0.20 mW/cm^2), the required physical spacing is 14.1 meters. Since the bottom of the antenna is approximately 95 meters above the ground, the height of the structure limits the possible excessive radiation values to at least 80.9 meters above the ground. Again using Equation 10 of OET Bulletin 65, and using the total average RF power corrected for steep angles, the *actual RF level at 2 meters above the ground from WENY-FM is 4.62 uW/cm^2 or 2.31 % of the total allowable at FM.* **WENY-FM contributes less than 3 % of the total RFR energy at ground level at this multiple use site.**

Therefore the total calculated RFR levels at the base of the tower contributed by the WENY-FM licensed operation, will *be below 5 %* allowable.

The total calculated RFR energy form all three stations is 7.5 **uW/cm^2 and well below the allowable limits of OET Bulletin 65 for the general public/uncontrolled environment**.

CONCLUSIONS ON RFR ANALYSIS

Based on the on the calculations included herein, I believe that the multiple use existing tower site will be in compliance with 47 CFR 1.1307 and FCC OET Bulletin 65 with the inclusion of the proposed WSKA-DT.

The antenna supporting structure is enclosed by a chain-link fence to prevent unauthorized access. As a precaution to employees, a suitable sign is posted at the base of the tower alerting maintenance personnel to the presence of RFR energy so that appropriate action can be taken when access on the tower is required.

Also, at present, not all broadcast transmitters co-located on the site are owned by the applicant. The applicant further states that he is a party to an electromagnetic radiation abatement plan to educate employees and workers as to the potential hazards when working on the tower. During periods of maintenance where workers on the tower could be exposed to excessive levels of RFR energy, any transmitting system that could pose a hazard will be either turned off or reduced in power to insure that workers are not subject to excessive values of non-ionizing radiation.

With these procedures in place, we believe the proposed WSKA-DT operation is in compliance with the RFR exposure requirements of 47 CFR 1.1307(b).

NEARBY AM FACILITIES

There are no AM facilities within 3.2 km of this site.

BLANKETING INTERFERENCE

The area surrounding the proposed site is rural residential, however due to the narrow elevation beamwidth of the proposed WSKA-DT antenna, no blanketing interference is anticipated. However, the applicant will investigate and cure any complaints reported within the blanketing area.

There is one FM broadcast facility and one NTSC LPTV co-located with the proposed WSKA-DT. The facilities are WENY-FM, CH 224 and W21BW, Channel 21. No intermodulation interference is expected.

FAA NOTIFICATION

An application to construct the tower to accommodate the WSKA-DT antenna will be filed with the FAA shortly.