

Larry H. Will, P.E.

Broadcast Engineering

1055 Powderhorn Drive
Glen Mills, PA 19342-9504

PH (610) 399-1826
FAX (610) 399-0995
E-Mail lwill@voicenet.com

THE RICHARD STOCKTON COLLEGE OF NEW JERSEY

POMONA, NEW JERSEY

LICENSEE OF

WLFR(FM), CHANNEL 219

POMONA, NEW JERSEY

FCC Facility ID #63469

FCC FILE No. BLET-19920327KG

MINOR CHANGE

APPLICATION FOR MODIFICATION OF LICENSE

TO SPECIFY A NEW TOWER, HAAT, AND ERP

ENGINEERING EXHIBIT 22

November 16, 2004

THE RICHARD STOCKTON COLLEGE OF NEW JERSEY

POMONA, NEW JERSEY

LICENSEE OF

WLFR(FM), CHANNEL 219

POMONA, NEW JERSEY

FCC Facility ID #63469

FCC FILE No. BLET-19920327KG

ENGINEERING EXHIBIT 22

1. 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 WLFR(FM) as follows:

The proposed WLFR(FM) is the only broadcast antenna at the tower location required to be considered by 47 CFR 1.1307(b).

WLFR(FM)

WLFR(FM), Channel 219, is proposing to utilize an ERP of 0.5 kilowatts with circular polarization. The proposed WLFR(FM) transmitting antenna is a Shively Model 6812-2-SS 2 bay one half wavelength spaced unit with an elevation power gain of 0.7x side mounted with a base approximately 56 meters up the tower. Because of the elevation gain, the ERP at angles departing +/- 35 degrees from the horizon is attenuated by a minimum of 6 dB. For occupational/controlled environment (1.0 mW/cm^2 at 89 MHz) and utilizing Equation 10 of OET Bulletin 65 and allowing for 6 dB at steep angles, the required physical separation is 4.1 meters. For general population/uncontrolled environment (0.20 mW/cm^2), the required physical spacing is 9.2 meters. Since the

bottom of the antenna is approximately 56 meters above the ground, the height of the structure limits the possible excessive radiation values to at least 45.8 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 WLFR(FM) is $5.7 \mu\text{W}/\text{cm}^2$ or 2.9 % of the total allowable at 92 Mhz.* The WLFR(FM) antenna delivers less than 3 % of the general public/uncontrolled environment permissible RFR energy at ground level at this site.

CONCLUSIONS ON RFR ANALYSIS

Based on the calculations included herein, I believe that the site will be in compliance with 47 CFR 1.1307 and FCC OET Bulletin 65.

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, the broadcast transmitter on the site is 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 WLFR(FM) operation is in compliance with the RFR exposure requirements of 47 CFR 1.1307(b).

2: NEARBY AM FACILITY

Per a search on AM Query, there are no AM stations within 3.2 km of the proposed WLFR(FM) transmitter site.

3: BLANKETING INTERFERENCE

The area surrounding the proposed site is rural residential college campus, however due to the wide frequency separations, no blanketing interference is anticipated. However, the applicant will investigate and cure any complaints reported within the blanketing area. No intermodulation interference is expected.

4. FAA NOTIFICATION

The approved FAA Study Number is 2004-AEA-1294-OE. Required FCC Registration has not yet been filed by the tower owner.