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THE UNIVERSITY OF NORTH CAROLINA

LICENSE OF W68DM

BREVARD, NORTH CAROLINA

FAC ID# 69220

FCC FILE # BLTT-20020502AAA

APPLICATION FOR A CONSTRUCTION PERMIT FOR

A DTV DISPLACEMENT CHANNEL ON CH 19

FOR W68DM

(MINOR CHANGE)

ENGINEERING EXHIBIT 12

July 5, 2006

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REASEARCH TRIANGLE PARK, NC

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EXHIBIT 12 – RFR STATEMENT

There are no AM stations within 3.2 km of the proposed W68DM (CH 19) displacement channel site. The instant application is excluded under 1.1306. Using the procedures outlined in OET Bulletin 65, Edition 97-01 and specifically Appendix A, Table 1 and Equation 10, Page 21, I have evaluated the RFR energy from the antenna system of W68DM (CH 19) as follows:

Proposed W59AD (CH 49) is one of two LPTV stations at this general location required to be considered by 47 CFR 1.1307(b). The other station on an adjacent tower is W02AG with 65 watts ERP.

W68DM W68DM (CH 19) is proposing operation on Channel 19 utilizing a maximum average digital ERP of 0.5 kilowatt with a non-directional antenna and horizontal polarization. The proposed Channel 19 transmitting antenna is a high gain unit with a power gain of 9x side mounted with a C/R 45 meters up the tower. With the resulting high elevation gain, the RFR energy at steep angles below the horizon are expected to be at least 9 dB below that of the main

lobe. Utilizing Appendix A, Table 1 the maximum occupational/controlled exposure level at CH 19 is 1677 uW/cm^2. Using Equation 10, Page 21, the distance to the 1677 uW/cm^2 contour is 1.5 meters. For general population/uncontrolled environment the maximum exposure level is 335 uW/cm^2. Again using Equation 10, Page 21, the distance to the 335 uW/cm^2 contour is 3.4 meters. Since the base of the antenna is approximately 43 meters above ground, the height of the structure limits the possible excessive RFR levels to at least 39.6 meters above ground. Again using Equation 10, the predicted RFR energy levels at 2 meters above ground is calculated at 2.8 uW/cm^2 or 0.8% of the FCC OET 65 allowable RFR energy exposure for the general population/uncontrolled environment. Proposed W68DM (CH 19) is calculated to contribute less than 5% of the total RFR energy level in this multi-station environment.

W02AG W02AG is operating on Channel 2 utilizing a maximum visual ERP of 0.065 kilowatt with a directional antenna and horizontal polarization. The Channel 2 antenna is a 2 bay unit with an elevation power gain of 5x side mounted with a C/R 33 meters up the tower. With the resulting high elevation gain, the RFR energy at steep angles below the horizon are expected to be at least 5 dB below that of the main lobe. Utilizing Appendix A, Table 1 the maximum occupational/controlled exposure level at CH 2 is 1000 uW/cm^2. Using Equation 10, Page 21, the distance to the 1000 uW/cm^2 contour is 0.8 meters. For general population/uncontrolled environment the maximum exposure level is 200 uW/cm^2. Again using Equation 10, Page 21, the distance to the 200 uW/cm^2 contour is 1.8 meters. Since the base of the antenna is approximately 31 meters above ground, the height of the structure limits the possible excessive RFR levels to at least 29 meters above ground. Again using Equation 10, the predicted RFR energy levels at 2 meters above ground is calculated at 0.9 uW/cm^2 or 0.5% of the FCC OET 65 allowable RFR energy exposure for the general population/uncontrolled environment. W02AG is calculated to contribute less than 5% of the total RFR energy level in this multi-station environment.

Therefore the total levels of all RFR energy sources at all points on the ground are below that required for protection of both the employees and the general public as required by ANSI 95.1-1992 or FCC OET 65, Edition 97-01. The total RFR level from all sources is calculated not to not exceed 1.7% of the FCC allowable for the general public/uncontrolled environment anywhere on the ground in the immediate area of the tower. Neither workers nor the general

public will be inadvertently exposed to RFR energy levels exceeding the maximum permissible exposure (MPE) levels set forth in Section 1.1310 of the Rules.

Where radio frequency fields in excess of FCC guidelines are predicted to be encountered (very near the station's transmission antenna), signs and protective devices shall secure the area affected from the general public. With respect to direct employees of this licensee, OSHA RFR guidelines will be observed. Contractors and other outside workers potentially exposed to such areas shall be advised of the hazard by posted notices or other means. The station will reduce power or cease operation, if necessary, in order to protect workers on the tower.

With these procedures in place, we believe the proposed W68DM (Channel 19) operation is in compliance with the RFR energy requirements of 47 CFR 1.1307(b).