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THE UNIVERSITY OF NORTH CAROLINA

PERMITTEE OF W30IF-D

GARNER, NORTH CAROLINA

FAC ID# 69080

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**APPLICATION FOR A MODIFICATION OF CONSTRUCTION PERMIT
TO SPECIFY A NEW TRANSMITTER LOCATION**

ENGINEERING EXHIBIT 12

September 6, 2010

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RESEARCH TRIANGLE PARK, NC

**APPLICATION FOR A MODIFICATION OF CONSTRUCTION PERMIT TO
SPECIFY A NEW TRANSMITTER SITE**

EXHIBIT 12 – RFR STATEMENT

There are no directional AM stations within 3.2 km, nor any non-directional AM stations within 0.5 km of the proposed W30IF-D replacement translator proposed site. The instant application is excluded under 1.1306. There are no physical changes proposed to the existing pre 1986 tower or immediate surrounding area. The proposed replacement translator is located at a multi-user site.

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 W30IF-D as follows:

W30IF-D: W30IF-D, Channel 30 is proposing digital DTV replacement operation on Channel 30 and utilizing an ERP of 0.5 kilowatts average digital power with a directional antenna and horizontal polarization. The proposed Channel 30 transmitting antenna is a high

gain unit with an elevation power gain of 4x side mounted with a C/R 125 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 30 is 1.9 mW/cm^2 . Using Equation 10, Page 21, the distance to the 1.9 mW/cm^2 contour is 1.0 meter. For the general population/uncontrolled environment the maximum exposure level is 379 uW/cm^2 . Again using Equation 10, Page 21, the distance to the 379 uW/cm^2 contour is 2.1 meters. Since the base of the antenna is approximately 123 meters above ground, the height of the structure limits the possible excessive RFR levels to at least 120.9 meters above ground. Again using Equation 10, the predicted RFR energy levels at 2 meters above ground is calculated at 0.11 uW/cm^2 or 0.003% of the allowable RFR energy exposure for the general population/uncontrolled environment per FCC OET 65.

Therefore the total levels of RFR energy from the proposed relocated W30IF-D replacement translator 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 RFR level from NEW replacement translator is calculated not to not exceed 0.003% 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 from W30IF-D replacement translator exceeding the maximum permissible exposure (MPE) levels set forth in Section 1.1310 of the Rules. Furthermore, since the total contribution from W30IF-D is below 5% of the allowable, this proposed station is exempt from further consideration on total RFR levels at this multi-user site.

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 relocated W30IF-D replacement translator operation will be in compliance with the RFR energy requirements of 47 CFR 1.1307(b).