



ENGINEERING STATEMENT

OF

JOHN F.X. BROWNE, P.E.

**IN SUPPORT OF REQUEST FOR
SPECIAL TEMPORARY AUTHORITY
AND PHASED TRANSITION**

FOR WNMU-DT

MARQUETTE, MI

Background

The Board Of Control, Northern Michigan University (NMU) holds a license for WNMU-TV CH13 analog (BLET-20060926AKR, Facility ID# 4318) and also holds a post-transition construction permit (BMPEDT-20080312ACG) for WNMU-DT digital CH13. NMU is returning, post transition, to CH13 at its analog tower site and had plans to replace the analog CH13 antenna with a new omni-directional antenna. Delivery and installation of the new antenna specified in the construction permit will not take place until May of 2009. NMU is now seeking an STA for a phased transition in order to operate post transition, beginning on February 17, 2009, with the omni-directional antenna that is being used by the analog facility. Since the radiation center of the analog antenna is 8 meters higher than the antenna specified in the construction permit, NMU would reduce the ERP to keep the predicted coverage inside that of the facility specified in the construction permit.



Site

The facility is located within the Canadian border zone and coordination with the Canadian government would not be an issue as the coverage of the proposed STA facility using the analog antenna would not exceed that of the facility specified in the construction permit.

Antenna System and Tower

NMU proposes to utilize the same omni-directional antenna that is being used by its analog facility (an RCA TW-15A13-P FCC ID No. 74322). The radiation center of this antenna is 8 meters higher than the antenna specified in the construction permit and, therefore, NMU proposes to operate with the ERP reduced from 15.4 kW to 13.5 kW so that the coverage remains inside that of the authorized construction permit. A map is attached as Figure 1 that depicts the coverage of the facility specified by the construction permit and that of the proposed STA facility.

The tower (ASRN 1023010) is the same tower as specified in the present construction permit and also used by the analog facility. Since there is no change in the overall height of the antenna structure, neither notification to the FAA nor any change of the tower registration is necessary.

Coverage

The entire principal community of Marquette, MI is well within the predicted F(50,90) 43dBu contour using the proposed directional antenna and 13.5 kW ERP. As can be seen from the map attached as Figure 1 the area that the proposed STA facility will cover is for all practical purposes the same as the area covered by the facility specified in the construction permit and, therefore, the population covered is essentially 100 percent of the Appendix B value.



Interference

Since the proposed coverage very nearly matches that specified in the construction permit there would be no new interference issues.

Environmental/RFR

The proposed construction does not require preparation of an Environmental Assessment, as it does not involve any of the factors listed in Section 1.1306.

The additional ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.000175 mW/cm^2 , which is less than 5% of the MPE for public exposure (0.2 mW/cm^2) at the proposed frequency and, therefore, the proposal is excluded from further consideration.

NMU agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers are encouraged to wear personal RFR monitors when on the structure. A locked security fence encloses the tower base and appropriate signage warning of RFR hazards are posted.

B**Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.



John F.X. Browne, P.E.
July 22, 2008

WNMU-DT vs WNMU-DT STA

WNMU-DT

BMPEDT20080312ACG
Latitude: 46-21-10.20 N
Longitude: 087-51-14.50 W
ERP: 15.40 kW
Channel: 13
Frequency: 213.0 MHz
AMSL Height: 770.0 m
Horiz. Pattern: Omni

WNMU-DT STA

Latitude: 46-21-10.20 N
Longitude: 087-51-14.50 W
ERP: 13.50 kW
Channel: 13
Frequency: 213.0 MHz
AMSL Height: 778.0 m
Horiz. Pattern: Omni



Black = WNMU-DT 36 dBu F(50,90) contour with 15.4 kW at 770m AMSL Omni

Red = WNMU-DT STA 36 dBu F(50,90) contour with 13.5 kW at 778m AMSL Omni

Figure 1