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**STA REQUEST FOR WIWN – FOND DU LAC, WISCONSIN
FOR OPERATION AT VARIANCE TO LICENSE**

INTRODUCTION

The licensee of WIWN seeks authority *nunc pro tunc* to continue operating at an ERP above its licensed authorized value. FCC file #68656 contains the initial request for operation at this higher power level and the reasons and justification for the request. This STA requests the same proposed operating parameters with exactly the same equipment and facility as was sought and received in the STA application file identified above.

**HISTORY OF RECEPTION DIFFICULTY OF WIWN AND OTHER LOW-VHF
DIGITAL TELEVISION OPERATION**

As laid out in the initial request for operation at higher power, S Merrill Weiss identified numerous factors that have contributed to the reception problems associated with WIWN (and many low VHF channel digital TV stations). None of these factors has changed since the initial STA was granted. In fact, man-made noise continues to rise with the proliferation of home-use devices. As pointed out in the previous FCC File #68656 application, “*The FCC itself long has recognized the problems with DTV broadcast operations in the Low-VHF part of the RF spectrum. As the Commission has stated, “VHF channels have certain characteristics that have posed challenges for their use in providing digital television service.”¹ In further explanation, the Commission said, “the propagation characteristics of these channels allow undesired signals and noise to be receivable at relatively farther distances, nearby electrical devices tends to emit noise in this band that can cause interference, and reception of VHF signals requires physically larger antennas ... relative to UHF channels.”²*

Early in 2012, the applicant filed a license modification request to operate at 48 kW as that was within the capability of the planned transmission system and did not cause objectionable interference to any other facility. That application (File

¹ *Matter of Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF, Notice of Proposed rulemaking, ET Docket No. 10-235, FCC 10-196 ¶ 42 (rel. Nov. 30, 2010)*

² *Id.*

#36131) remains pending.

RESULTS OF OPERATION AT 34 KW ERP WITH PRIOR STA

Since the initial STA was granted, WIWN has installed a transmission system capable of generating 48 kW ERP as outlined in FCC file #36131 versus the authorized 9 kW. This transmission system began operations at 34 kW ERP, consistent with its temporary authorization, in February of 2020.

Since WIWN began STA operation at 34 kW, anecdotal evidence suggests that some viewers have experienced more reliable reception at some locations. But, as demonstrated by the attached information to this exhibit identifying viewer responses received during WIWN's operations at 34 kW ERP, this improvement is limited. The licensee of WIWN needs more time and the change of seasons, however, to assess whether operation at 34 kW is a sufficient power level to overcome the signal loss associated with the poor efficiency of UHF and High VHF antennas operating on a Low VHF channel (which is the typical situation for the majority of viewers) and the high level of man-made noise. The results of an initial "drive test" were inconclusive due to the methodology used. Further tests are in process of being scheduled. This instant application will allow the measurement process to gather more information and determine potential solutions focusing on power or different antenna technology.

SPECIFIC RULE ADDRESSED BY STA REQUEST

Section 73.622(f)(6) limits DTV stations in Zone I to a maximum of 10 kW ERP at 305 meters Height Above Average Terrain (HAAT). WIWN seeks Special Temporary Authority to operate at a power level of 34 kW ERP at its existing HAAT of 338 m.

It should be noted that other ERP values greater than the maximum have been authorized to other Zone I Low-VHF stations in similar circumstances to those of WIWN. For example, the application of WPVI, LMS File #34890 where 56 kW at an HAAT of 332 meters was granted and the application of WRGB, LMS file #93044 where the licensee was granted 90 kW ERP at an HAAT of 392 meters.

An attachment to this application verifies that the proposed ERP and HAAT of 48 kW and 338 meters does not cause objectionable interference based on the output obtained from TV Study. Thus it will obviously not cause any interference at 34 kW and 338 meters.

Likewise, another attachment identifies the RF Exposure proposed by this STA and it verifies that no RF exposure levels above the General Population Access levels identified in OET-65 are reached. Thus, no environmental assessment

issues are triggered by the proposed facility.

PUBLIC INTEREST

The grant of this STA will serve the public as it will permit viewers the opportunity to receive the WIWN signal on a more consistent basis. The increase in power provides an inherent 5.8 dB greater signal-to-noise capability compared to the license ERP value. Although this has only provided incremental improvement in reception of WIWN's signal, the additional power has benefited some viewers. The additional time will allow the licensee to continue to evaluate the appropriate power level, antenna, and what other changes may be required to serve the Milwaukee market more effectively.

CONCLUSION AND SUMMARY OF REQUEST

The licensee seeks to provide another option for viewers in the Milwaukee area. Without the power level necessary to overcome the man-made noise and the poor efficiency of high VHF or UHF antennas (which most people are using in the Milwaukee market), however, many viewers have difficulty receiving WIWN's signal.

As mentioned previously, WIWN has an application for construction permit (LMS File #36131). WIWN expects to operate at the higher power level sought in this STA request until anticipated approval of its construction permit application.

Sincerely,



Consulting Engineer
Attachments