

Abstract

This application is to change WHTX, Warren, OH from using a directional antenna to omnidirectional, utilizing tower two of the licensed WHTX directional array. It seeks to **increase** daytime power from 500 Watts to **750 Watts**, and increase night power from 116 Watts to 170 Watts. This amendment removes a request for PSRA operation.

Description of Facilities

This application proposes to utilize tower two of the authorized WHTX directional array as its day and night antenna. WHTX has been operating in this mode with 125 Watts under a Special Temporary Authorization since tower 1 of the array was destroyed in a storm. No physical construction is required to implement these requested changes, and the station equipment has been configured for omnidirectional service. This application requests 750 Watts day and 170 Watts night.

Exhibit 13 includes a satellite photo of the WHTX transmitter site showing the 180 meter radius of the 1 V/m contour. There is no population within this contour, therefore complying with §73.24(g) and §73.33.

WHTX is a Class D station presently authorized to operate at night with a low power signal. This application proposes to increase night power, increasing the night field to 158.0 mV/m, clearly above the minimum for class B, and in compliance with §73.45 and §73.182 and §73.189.

WHTX operates on a Mexican clear channel, and the US – Mexican AM agreement requires no critical hours protection.

Community Coverage

Exhibit 14 is a map showing the 0.5, 2, 5 and 25 mV/m day contours, along with the boundaries of Warren, OH, the principal community. The 5 mV/m day contour clearly encompasses the principal community.

Under the provisions of the revised §73.24(i), AM station modification applications need not show coverage of the station's principal community at night.

Interference

Groundwave (amended)

Daytime groundwave interference is detailed on Exhibit 17 Figure 1. It shows no prohibited overlap with any other station.

Canadian allocation CHLO St. Thomas, ON is fully protected within the land area of Canada, as there is no overlap of the proposed 0.025 mV/m with either of the CHLO daytime records' 0.5 mV/m on land within Canada.

Exhibit 17 Figure 2 is a detail showing the non-overlap between the WHTX contours and co-channel WKHJ, Latrobe, PA and with third adjacent WYCL Niles, OH where the spacing is difficult to see on Figure 1. **FCC figure M-3 was used in determining the distance to contours for all stations in this report except WHTX.**

Exhibit 17 Figure 3 details the measurements of the ground conductivity which were taken from WHTX while operating at its authorized STA power of 0.125 kW – ND-D. The power output of WHTX was checked, and maintained at the STA level throughout the period of measurements. Exhibit 17 Table 1, 2 and 3 detail the measurements for the 110, 125 and 140 degree radials, respectively, and Graphs 1,2 and 3 show the measured conductivity analysis for those radial measurements. Graph 4 shows the standard conductivity curves for 1570 kHz and Table 4 is the table of ground conductivity values used in this application.

Skywave

Exhibit 18 Figure 1 is a map showing the Class A protection. It shows the proposed 0.025 mV/m 10% skywave (US-Mexican curve) does not extend southward beyond the boundaries of the United States. Class A XERF is fully protected.

Exhibit 18 Table 1 shows calculation of the Night Interference Free contour for the proposed

night operation.

Exhibit 18 Table 2 shows the permissible night radiation for each station requiring protection from interference, along with the proposed radiation. The limiting station is WPTW, Piqua, OH.

Engineer's Statement

This is to certify that this report has been prepared by myself. It is correct and accurate of my own knowledge, except where stated otherwise, and where that is so, the information is correct to the best of my knowledge and belief.

I further certify that I am a Licensed Professional Engineer in the State of New Jersey, and the Commonwealth of Pennsylvania with a BSEE degree from the Newark College of Engineering of NJIT, and that I am, and have been for over thirty years, regularly engaged in the practice of radio engineering with the firm of Radiotechniques Engineering, LLC, with offices at 402 Tenth Avenue, Haddon Heights, NJ. I am a member of the AFCCE, Senior member of the IEEE and SBE and hold a FCC General Radiotelephone Operator License. My qualifications are a matter of record with the FCC.



5 December 2019

Edward A. Schober, PE