

APPLICATION FOR STATION LICENSE
WXTU LICENSE LIMITED PARTNERSHIP
WXTU (FM) RADIO STATION
CH 223B - 92.5 MHZ - 15.0 KW (DA)
PHILADELPHIA, PENNSYLVANIA
October 2003

TECHNICAL STATEMENT

This Technical Statement was prepared on behalf of WXTU License Limited Partnership ("WLLP"), licensee of radio station WXTU, Channel 223B, Philadelphia, Pennsylvania. WLLP holds an outstanding construction permit authorizing minor changes in the facilities of WXTU (BPH-20000630AEI). This instant application seeks a license to cover this outstanding construction permit. Attached as Exhibit A is a calculation of the transmitter power output for WXTU.

The proposed minor change, as outlined in BPH-20000630AEI, was a change in the directional envelope pattern, which affected the azimuths between 140° and 190°, bringing the envelope to full field in those azimuths.¹ Since WXTU has several pre-1964 grandfathered shortspaced, it could not alter its authorized directional system in any of the remaining azimuths. As such, WXTU is still operating, and will continue to operate, its licensed directional antenna system, as previously authorized in BLH-19860325KC. The authorized change effectively expanded the envelope pattern only. No actual construction or change was necessary or undertaken.² It is noted that the operating WXTU antenna system is elliptically polarized,

1) The ability to change the pattern came through an agreement with the license of station WVLT, Channel 221A, Vineland, New Jersey.

2) The adjustment in power was to compensate for a slight change in the height above average terrain, based on the use of a computer 3 second arc database, rather than data extracted from topographic maps which was used for the facilities proposed in BPH-19831102AI.

based on its design. As such, while the power of the horizontal plane reaches 15.0 kilowatts, the vertical polarization reaches 12.4 kilowatts.³

There were five conditions placed on the WXTU permit. The first four conditions relate to the use of a directional antenna for WXTU. As indicated above, WXTU continues to operate its authorized directional (as granted in BLH-19860325KC) with no changes. Therefore, we have attached as Exhibit B the antenna proof of performance from the manufacturer of the WXTU antenna, in the same form submitted with BLH-19860325KC. The data is supplemented with a horizontal plane relative field pattern of the actual operating antenna system (which has a calculated RMS of 74.4%) and a relative field envelope pattern, as submitted with BPH-20000630AEI (which has a calculated RMS of 78.6%). These supplements show the actual measured pattern is within 85% of the envelope pattern, which was submitted with the application for construction permit. Based on the supplemental information, the actual/operating antenna relative field pattern does not extend beyond that authorized in BPH-20000630AEI. Also attached as part of Exhibit B is a statement from an engineer that the antenna was installed and assembled in accordance with the antenna manufacturer's specifications, as well as a verification from a Land Surveyor that the antenna is oriented in accordance with the manufacturer's instructions. Again, the actual WXTU antenna has not been changed or altered in any way from its original installation in 1986. As a result, we believe the facility is operating in accordance with the Commission's rules.

3) The gain figures on the horizontal and vertical planes were taken from BLH-19860325KC and are shown on Exhibit A.

The remaining condition requires the power of the station be lowered, or operation ceased, to ensure that persons having access to the site are not exposed to radio frequency electromagnetic fields in excess of the FCC guidelines. WLLP herein restates that it will lower the power of WXTU or cease operation, as necessary, to ensure no one is exposed to fields in excess of the FCC limits.