

ENGINEERING REPORT RE
MINOR AMENDMENT TO APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT (BMP20010713ABJ)
TO INCREASE DAYTIME POWER FOR
WLUX, ISLIP, NEW YORK
540 KHZ 1.1 D/0.5 N KW DA-2

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Introduction

This engineering report has been prepared on behalf of Long Island Multimedia, LLC ("LIMM") in support of a minor amendment to the WLUX application (BMP-20011121AAI) to modify its outstanding construction permit (BMP-20010713ABJ). This minor amendment application proposes to increase the daytime power to 1.1 kW utilizing the authorized two tower directional array with different day and night antenna parameters. No other changes are proposed.

WLUX is licensed to operate on 540 kHz with daytime power of 0.25 kW utilizing a non-directional antenna and is authorized for 0.50 kW daytime utilizing a two tower directional antenna system. WLUX is also licensed for a secondary nighttime non-directional operation with 0.204 kW and has a pending application to increase its nighttime power to 0.25 kW utilizing the authorized two tower directional array.

Applicable exhibits requested by Section III-A of FCC Form 301 are either included in this engineering report or referenced to the engineering exhibits associated with the WLUX authorizations for 0.32 kW (BMP20000712AAH) and for 0.50 kW, DA-D (BMP-20010713ABJ) operations.

Transmitter Site

The existing antenna site is located at 180 Freeman Avenue, Islip, Suffolk County, New York. The geographic coordinates (NAD-27) of the existing non-directional tower based on the antenna structure registration No. 1006778 when rounded to the nearest second are as follows:

North Latitude: 40° 45' 08"

West Longitude: 73° 12' 51"

The geographic coordinates (NAD-27) of the proposed tower based on the antenna structure registration No. 1219580 when rounded to the nearest second are as follows:

North Latitude: 40° 45' 03"

West Longitude: 73° 12' 49"

The geographic coordinates (NAD-27) of the directional array center when rounded to the nearest second are as follows:

North Latitude: 40° 45' 06"

West Longitude: 73° 12' 50"

Daytime Allocation Situation

The proposed 1.1 kW directional daytime operation of WLUX will not cause any new prohibited overlap of pertinent contours with any authorized or proposed stations operating on 540 KHz and within plus three channels¹ and where existing overlap occurs it will not be increased. The present 0.25 kW non-directional and authorized 0.50 kW directional operation of WLUX receives co-channel contour overlap from the present operation of WDMV, Pocomoke City, Maryland, which will increase slightly. The received overlap is the result of a long salt water path (Atlantic Ocean) between the coastal sites of both stations which are separated by more than 360 kilometers. Therefore, it is believed that the WLUX proposal is in compliance of Section 73.37 of the Commission's Rules. However, if a waiver of Section

¹Based on FCC Rules and the Commission's letter dated December 7, 2001, this application does not consider the first-adjacent channel construction permit of WKNJ, Lakeside, New Jersey, or its recent application to specify Harriman, New York, as its community of license.

73.37 is considered necessary for the aforementioned increase in received co-channel contour overlap, it is hereby requested.

Detailed maps portraying the contours of WLUX and all stations involved in the 540 KHz allocation situation are attached as Exhibits E-6 through E-9. As indicated in these exhibits, WLUX presently has prohibitive contour overlap with co-channel station WDMV, Pocomoke City, Maryland, and the WDMV authorization for Brinklow, Maryland. The present area of prohibitive contour overlap to the licensed and authorized facilities of this station is 3,695 and 84 square km, respectively. The area of prohibitive contour overlap from the proposed WLUX operation is 3,643 and 84 square km, respectively. Therefore, the prohibitive contour overlap to the licensed and authorized operations of co-channel station WDMV from the WLUX proposed operation would be reduced or unchanged. Therefore, no increase in area of existing prohibitive contour overlap will occur as a result of this proposal.

Field strength measurements were made in connection with the WLUX daytime power increase proposal and were attached as Appendix A in the previously mentioned WLUX applications (BMP-20000712AAH) and (BMP-20010713ABJ). The field strength measurement data is not being re-submitted with this application but, rather is referenced to the WLUX broadcast license file.

The values of conductivity, azimuths, and inverse distance field strengths used as a basis for coverage contours and for the prohibitive contour overlap studies with other AM stations are included on the tables attached hereto as Exhibit E-10. This detailed information in the form of computer generated tabulations also shows the basis of the ground conductivities and distance to contours shown on the FCC Figure M-3 maps. The pertinent contours of other AM stations depicted on the M-3 maps have been

obtained from their respective license or pending application files, where indicated, or were computed based on their standard radiation pattern and Commission's estimated (Figure M-3) and/or measured conductivities.

Nighttime Situation

There is no change proposed in the authorized secondary nighttime non-directional operation of 204 watts or the nighttime power increase application (BMP-20011121AAI).

Contour Data

The distances to various field intensity contours were obtained from the groundwave field strength versus distance Graphs 1, 1A, 2, and 2A of Section 73.184 of the Commission's Rules. Where changes in estimated ground conductivity occur, the equivalent distance method of computation was used. The previously filed measurement data shown was used for computation of several contours and incorporates the groundwave field strength versus distance graphs.

1 V/m Contour

The WLUX site map included herein (Exhibit E-3) shows the present, authorized and proposed daytime 1 V/m contours. The estimated population within the proposed 1 V/m contours is 209 (less than 300) people based on the 1990 computerized U.S. census data.

Based on the characteristics immediately surrounding the existing site and the current 0.25 kW operation, it is believed that the proposed 1.1 kW daytime operation would not result in any significant interference problems within the proposed blanketing area. However, in case of a problem, WLUX takes full responsibility to satisfy all reasonable complaints of blanketing interference within its 1 V/m contour. The

remedial steps may include installation of filters, traps, or receiver replacement in accordance with Section 73.88 of the Commission's Rules.

Other Broadcast Stations

There are no AM, FM, or TV broadcast stations operating within 3 kilometers of the existing WLUX antenna location with the exception of collocated FM station WBZO, Bay Shore, New York. Station WBZO operates on Channel 276A (103.1 MHz) with 3 kW effective radiated power and is side-mounted on the existing WLUX tower (Registration No. 1006778).

Main Studio Location

There will be no change in the location of the present main studio.

RF Fields

According to Table 3 in Supplement A to OST Bulletin 65 (Edition 97-01), the Maximum Permissible Exposure (MPE) for specified electric and magnetic fields ("worst-case") would not exceed at more than approximately 2 meters from the base of the tower for the proposed 1.1 kW daytime operation assuming 1.1 kW power into each tower. Therefore, the distance of 2 meters overstates the minimum distance at which the aforementioned field levels may be exceeded for each individual tower.

Presently, the WLUX transmitting site is completely fenced around the base of the tower. The security fencing and locked gate at the base of the existing tower prevents access to those areas. The new self supporting will also have security fencing and locked gate at the tower base. WLUX also has appropriate warning signs describing the nature of the potential hazard. Additionally, LIMM currently has a program of assuring compliance with the Commission's guidelines concerning exposure to RF fields.

Upon grant and construction of the WLUX power increase proposal, further compliance will be accomplished after conducting RF field measurements at the site. Access to any areas found to exceed the Commission's guidelines for MPE near the towers will be restricted by installing additional fencing. Such a fence around the towers would effectively block and restrict the access and unintentional use of the space near the towers.

With respect to work performed on the tower structure or inside the fenced area, station WLUX will modify its existing written procedures including reducing or terminating transmitter power to ensure that workers are not exposed to levels of radio frequency field in excess of the Commission's guidelines.

An environmental assessment (EA) is excluded under Section 1.1307 of the FCC Rules and Regulations since there is no change proposed in the currently authorized site or antenna configuration. Additionally both towers have FCC tower registration numbers.

For the reasons stated above, the WLUX proposal does not involve any actions specified in Section 1.1307(a) and (b) of the Commission's Rules; therefore, under Section 1.1306, the WLUX proposal is excluded from environmental processing.