

ENGINEERING REPORT

MINOR CHANGE APPLICATION

Increase in Power

WWBC(AM) – Cocoa, FL

1510 kHz

File No. BL-20030312BHV

December, 2003

COPYRIGHT 2003

MUNN-REESE, INC.

Broadcast Engineering Consultants
Coldwater, MI 49036

TABLE OF CONTENTS

Table of Contents
Discussion of Report

Exhibit 10 - Broadcast Facility

Exhibit 10.1 – Description of Proposed Antenna System
Exhibit 10.2 – Vertical Plan of Proposed Antenna System
Exhibit 10.3 – Horizontal Plan of Proposed Antenna System
Exhibit 10.4 – Copy of Existing Antenna Structure Registration
Exhibit 10.5 – Photograph of Proposed Site
Exhibit 10.6(a-c) – Present & Proposed Daytime/Critical Hours Service Contours
Exhibit 10.7 – Present & Proposed 1.0 V/m Blanket Contours

Exhibit 11 – Community Coverage (See Discussion)

Exhibit 12 – Main Studio Location (See Discussion)

Exhibit 13 – Main Interference Section (See Discussion)

Exhibit 14 – Groundwave Protections

Exhibit 14.1 – Map M-3 Allocation Study Present Operation
Exhibit 14.2 – Map M-3 Allocation Study Proposed Operation
Exhibit 14.3 – Polar Plot of Proposed Daytime Directional Standard Pattern
Exhibit 14.4 – Tabulation of Proposed Daytime Directional Standard Pattern
Exhibit 14.5 – Measurement information on WWBC, Cocoa, FL
Exhibit 14.6 – Measurement information on WEXY, Wilton Manors, FL

Exhibit 15 – Skywave Protections (No Nighttime Operation)

Exhibit 16 – Critical Hours Study

Exhibit 16.1 – Critical Hours Study Towards WLAC, Nashville, TN
Exhibit 16.2 – Polar Plot of Proposed Critical Hours Directional Standard Pattern
Exhibit 16.3 – Tabulation of Proposed Critical Hours Directional Standard Pattern

Exhibit 17 – RF Radiation Study

DISCUSSION

This firm was retained to prepare this engineering report in support of a minor change application for the facilities of AM broadcast station WWBC, 1510 kHz, Cocoa, FL, File No. BL-20030312BHV. Currently WWBC holds a license for 0.750 kW of daytime non-directional power. This application seeks the addition of an additional tower and an increase in daytime directional power to 50.0 kW with a reduced Critical Hours power of 25.0 kW using the same daytime operating parameters. The data and exhibit numbering contained herein is responsive to Section III-A of FCC Form 301.

Broadcast Facility. The broadcast facility remains in compliance with all applicable rules contained in *C.F.R. Chapter 47, Part 73, Subpart A*. The proposed WWBC antenna system will consist of a two tower directional array. Details of the proposed antenna system are located in **Exhibit(s) 10.1-5**. The existing tower bears Antenna Structure Registration Number 1027199. No physical changes in the overall tower height are proposed for this tower. TOWAIR has been consulted on the proposed tower and registration and obstruction lighting are not required. A map depicting the present 0.5 mV/m, 2.0 mV/m, and 5.0 mV/m daytime service contours for WWBC has been included as **Exhibit 10.6(a)**. A map depicting the proposed daytime service contours from the site has been included as **Exhibit 10.6(b)**. A proposed Critical Hours coverage map has been included as **Exhibit 10.6(c)**. Present and proposed 1.0 V/m "Blanket" Contours have been included as **Exhibit 10.7**.

Community Coverage. Community coverage remains in compliance with the requirements of §73.24(i). Cocoa, FL will continue to receive primary service as seen in **Exhibit(s) 10.6(b-c)**.

Main Studio Location. The main studio location remains in compliance with the requirements of §73.1125. Studios for WWBC will remain unchanged from the present facilities.

Groundwave Interference. The proposed allocation remains in compliance with the requirements of §73.37. **Exhibit(s) 14.1-2** are relevant allocation studies for the present and proposed operations. There is presently existing overlap given and received from adjacent channel station WHIM, Apopka, FL. Both given and received overlap will be reduced as seen in **Exhibit(s) 14.1-2**.

Skywave Interference. The proposed allocation is not subject to compliance with the requirements of §73.187. No nighttime operation is required for this allocation.

Critical Hours Interference. **Exhibit 16.1** is a study of the critical hours protection for WLAC, Nashville, TN. The results of the study indicate full protection will be provided at a power level of 25.0 kW.

Environmental Protection Act. The proposed allocation is in compliance with OET Bulletin No. 65. Full protection is afforded by the proposal. An RF Radiation study has been included in **Exhibit 17**.