

# **ENGINEERING REPORT**

## **MINOR CONSTRUCTION PERMIT APPLICATION**

**“Decrease in power from 5.0 kW to 3.8 kW”**

**WWCS(AM) – 540 kHz – Canonsburg, PA  
License No. BL-19941209AB**

**October, 2007**

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**MUNN-REESE, INC.**  
Broadcast Engineering Consultants  
Coldwater, MI 49036

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# DISCUSSION

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This firm was retained to prepare this engineering report in support of a minor construction permit application for the licensed facilities of AM broadcast station WWCS(AM), 540 kHz, Canonsburg, PA. Currently WWCS(AM) holds license BL-19941209AB for 5.0 kW of daytime directional power using a two tower array and 0.5 kW of nighttime power employing the same two towers, but with an alternate set of operating parameters. This application proposes a power reduction to 3.8 kW using the presently licensed daytime operating parameters at a reduced power. No changes to the nighttime operation are proposed. The data and exhibit numbering contained herein is responsive to Section III-A of FCC Form 301.

Pursuant to §73.3517(C) of the Commission's Rules, this instant application is being filed concurrently with an application for a minor change in the facilities of WGOP(AM) Damascus, MD. The WGOP(AM) application is being filed to change site locations and cities of license from Pocomoke City, MD to Damascus, MD. To accommodate the WGOP(AM) contingent filing, WWCS(AM) will reduce radiation towards the WGOP(AM) proposal. Both WGOP(AM) and WWCS(AM) are wholly owned by Birach Broadcasting Corp.

***A waiver of a full proof of performance is requested as this application proposes solely a decrease in power using the present licensed theoretical parameters.*** No other changes are being proposed. In addition, the present Custom Q value of 22.3607 has been ratioed down to 19.4936 using the following formula:

$$[\text{SQRT}(\text{Present Power} / \text{Proposed Power})] * (\text{Present Custom Q})$$

As a result, it is believed the burden of a full proof of performance is not warranted where no actual shift in field or phase is proposed and all relevant values can be ratioed accurately and appropriately. The applicant is not opposed to a partial proof of performance requirement as a stipulation for licensing.

**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 WWCS(AM) antenna system will remain a two tower daytime / nighttime operation. Details of the proposed antenna system are located in ***Exhibit(s) 11.1-5***. A map depicting the proposed daytime service contours has been included as ***Exhibit 11.6***. The proposed 1.0 V/m "Blanket" Contour has been included as ***Exhibit 11.7***.

**Community Coverage.** Community coverage remains in compliance with the requirements of §73.24(i). Canonsburg, PA will continue to receive daytime primary service as seen in ***Exhibit 11.6***.

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

**Groundwave Interference.** The proposed allocation remains in compliance with the requirements of §73.37. An abbreviated daytime allocation study has been included as the requested operating parameters constitute the presently licensed daytime parameters solely at a reduced power. As a result, all existing allocation protections will be inherently afforded protection by the sole reduction in power from 5.0 kW to 3.8 kW with no change from the licensed parameters.

Protection towards WGOP(AM).C and WGOP.L have been shown, as it was noted that supplemental measured conductivity data was used. Copies of supplemental measurement conductivity data have been included here-in.

## **DISCUSSION**

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**Skywave Interference.** No changes in nighttime operation are requested in this application.

**Critical Hours Interference.** The proposed allocation is in compliance with the requirements of §73.187. As the proposed parameters constitute the presently licensed daytime parameters solely at a reduced power, continued protection during Critical Hours is inherent.

**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 18.1.***