

ENGINEERING REPORT

**MINOR CHANGE APPLICATION
Change in Site Location**

**WPON(AM) – Walled Lake, MI
1460 kHz**

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Exhibit 18.1 – 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 WPON(AM), 1460 kHz, Walled Lake, MI. Currently WPON(AM) holds a license for 1.0 kW of daytime four tower directional power and 0.760 kW of nighttime three tower directional power. This application seeks to relocate the station to an alternate site location and reduce power to 0.670 kW of daytime four tower directional power and 0.175 kW of nighttime three tower directional power. The data and exhibit numbering contained herein are 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 WPON(AM) antenna system will consist of five total towers. Two of the four daytime towers will be incorporated into the three tower nighttime array. Details of the proposed antenna system are located in **Exhibit(s) 11.1-5**. TOWAIR has been consulted for all proposed towers and FCC Antenna Structure Registration is not required. A map depicting the present 0.5 mV/m, 2.0 mV/m, and 5.0 mV/m daytime service contours for WPON(AM) has been included as **Exhibit 11.6(a)**. A map depicting the proposed daytime service contours has been included as **Exhibit 11.6(b)**. Present and proposed 1.0 V/m "Blanket" Contours have been included as **Exhibit(s) 11.8(a-b)** for daytime and nighttime operations.. Present and proposed nighttime Interference Free Contours have been included as **Exhibit 11.7**.

Community Coverage. Community coverage remains in compliance with the requirements of §73.24(i). Walled Lake, MI will continue to receive daytime primary service as seen in **Exhibit(s) 11.6b**. Nighttime coverage of Walled Lake is not required as this application proposes a nighttime operation of less than 0.250 kW or 141 mV/m.

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

Groundwave Interference. The proposed allocation remains in compliance with the requirements of §73.37. **Exhibit(s) 15.1** and **15.3** are relevant domestic allocation studies for the present and proposed operations. All existing domestic overlaps will be maintained or reduced as seen in the provided exhibits. Present and proposed Region 2 studies towards all relevant Canadian allotments have been provided in **Exhibit(s) 15.2** and **15.4**.

Skywave Interference. The proposed allocation remains in compliance with the requirements of §73.182. **Exhibit 16.1** is a listing of all co-, 1st and 2nd adjacent channel stations employed in the nighttime channel study. A complete nighttime study has been conducted on all co- and 1st adjacent channel stations. In response to FCC attempts to streamline the application process, 1st adjacent channel and foreign nighttime protections in which the proposed operation will have a negligible effect have been omitted to reduce paperwork. A complete list of all protections will be supplied upon request. Analysis of the complete study has concluded the proposed operation will not interfere with any protected operation, however individual studies will be supplied for any station upon request. A tabulation of the proposed limitations has been supplied. The proposed nighttime operation does not meet the minimum 250 watt and 141 mV/m RMS protection threshold. Therefore, the proposal is not protected from other full-time stations.

Critical Hours Interference. The proposed allocation is in compliance with the requirements of §73.187. No critical hours operation is required on 1460 kHz.

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**.