

# **ENGINEERING REPORT**

## **MINOR CHANGE CONSTRUCTION PERMIT APPLICATION**

**“Nighttime Directional Site Relocation Application”**

**WIST(AM) – 690 kHz - New Orleans, LA**

**September, 2007**

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Exhibit 18.1 – RF Radiation Study

## DISCUSSION

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This firm was retained to prepare this engineering report in support of a minor change construction permit application for the licensed facilities of AM broadcast station WIST(AM), 690 kHz, New Orleans, LA. Currently WIST(AM) holds a Class B license for 10 kW of daytime directional and 5.0 kW of nighttime directional power. WIST(AM) wishes to relocate the nighttime operation to an alternate site location while leaving the daytime operation unchanged. 2.0 kW of three tower nighttime operation are requested from a site north of New Orleans. As no changes are proposed to the daytime array, no daytime showings need be supplied. 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 WIST(AM) daytime antenna array will remain unchanged. The new nighttime antenna system will consist of a three tower directional array. Details of the proposed antenna system are located in **Exhibit(s) 11.1-5**. The proposed towers will require Antenna Structure Registration, therefore the FAA has been concurrently notified. A map depicting the present and proposed nighttime interference free service contours has been included in **Exhibit 11.6**. The proposed 1.0 V/m nighttime "Blanket" Contour has been included as **Exhibit 11.7**.

**Community Coverage.** Community coverage remains in compliance with the requirements of §73.24(i). Daytime coverage of New Orleans, LA will remain unchanged. Presently, less than 80% of New Orleans receives primary nighttime service, however the percentage coverage of New Orleans, LA will be increased from 56.79% to 79.31% as a result of this proposal. **Exhibit 11.6** contains the nighttime community coverage study.

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

**Groundwave Interference.** The proposed allocation remains in compliance with the requirements of §73.37. No changes during daytime hours are proposed. This application proposes new nighttime operating parameters only.

**Skywave Interference.** The proposed allocation will comply with the requirements of §73.182. **Exhibit 16.1** is a nighttime allocation study for the proposed WIST(AM) operation. In response to FCC attempts to streamline the application process, 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 meets the minimum 250 watt and 141 mV/m RMS protection threshold, therefore, the proposal is protected from other full-time stations. The nighttime directional standard pattern polar plot and tabulation have been included in **Exhibit(s) 16.3 to 16.4**.

**Critical Hours Interference.** The proposed allocation is in compliance with the requirements of §73.187. No changes during Critical hours are proposed in this application. This application proposed new nighttime operating parameters only.

**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**.