

**DENNY & ASSOCIATES, P.C.**  
**CONSULTING ENGINEERS**  
**OXON HILL, MARYLAND**

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**FCC FORM 301, EXHIBIT 24**  
**ALLOCATION STUDY**  
**APPLICATION FOR**  
**CONSTRUCTION PERMIT**  
**PREPARED FOR**  
**WDOD OF CHATTANOOGA, INC.**  
**STATION WDOD-FM**  
**CHATTANOOGA, TENNESSEE**  
**CH 243C      100 KW-H, 88 KW-V (MAX-DA)      336 METERS**

**INTRODUCTION**

This engineering exhibit was prepared on behalf of WDOD of Chattanooga, Inc. (hereinafter WDOD), licensee of station WDOD-FM, Chattanooga, Tennessee, in support of an FCC Form 301 minor change application for construction permit. The instant application requests correction of the WDOD-FM site geographic coordinates by two seconds of latitude and six seconds of longitude, correction of the WDOD-FM antenna radiation center height from 79 meters above ground level (AGL) to 84 meters AGL, and change of the WDOD-FM antenna radiation center height above average terrain (HAAT) from 329 meters to 336 meters. WDOD also proposes to replace the existing WDOD-FM directional antenna with a new FM directional antenna

whose composite plane antenna pattern does not exceed the licensed WDOD-FM horizontal plane pattern in any azimuth.

### ALLOCATION STUDY

A review of the assignments and allotments on channel 243, on the three immediately upper adjacent channels (244 through 246), the three immediately lower adjacent channels (240 through 242), and 53 and 54 channels removed from channel 243 (296 and 297) reveals that the proposed WDOD-FM channel 243C facility meets or exceeds the minimum distance separation requirements of Section 73.207 of the FCC Rules with respect to all known existing and proposed FM assignments and allotments with the exception of three stations: licensed co-channel commercial station WMJJ(FM), Birmingham, Alabama; licensed adjacent channel commercial station WMAK(FM), Murfreesboro, Tennessee; and licensed co-channel commercial station WXJB(FM), Harrogate, Tennessee.

Exhibit 25 of the instant application demonstrates that WDOD-FM is a grandfathered short-spaced station with respect to stations WMJJ(FM) and

WMAK(FM) within the definition of Section 73.213(a) of the FCC Rules and that the instant application complies with the requirements of Section 73.213(a).

WXJB(FM), HARROGATE, TENNESSEE

WXJB(FM) is licensed (FCC File Number BLH-19940203IB) to operate on channel 243A with maximum effective radiated power (ERP) of 6.0 kilowatts (kW), circularly polarized, and antenna radiation center HAAT of 100 meters, at a site identified by geographic coordinates 36° 34' 44" North Latitude, 83° 34' 42" West Longitude, referenced to the 1927 North American Datum (NAD 27). The distance between the licensed WDOD-FM site and the WXJB(FM) site is 222.5 kilometers. The distance between the corrected WDOD-FM site and the WXJB(FM) site is 222.3 kilometers. The minimum distance separation between cochannel Class A and Class C stations required by Section 73.207 of the FCC Rules is 226 kilometers. Hence, WXJB(FM) and the licensed WDOD-FM site are shortspaced by 3.5 kilometers and the instant proposal increases the shortspace between the WDOD-FM site and the WXJB(FM) site to 3.7 kilometers.

WDOD-FM began operation in 1960. The reference coordinates of the channel 243 FM Class C allotment at Chattanooga, Tennessee, are the same geographic coordinates as the licensed WDOD-FM operation, 35° 09' 39" North Latitude, 85° 19' 11" West Longitude, referenced to NAD 27.

The FCC allotted Channel 243A to Harrogate, Tennessee, in Mass Media Docket 85-231<sup>1</sup>, published in January 1985, with the same reference coordinates as the licensed WXJB(FM) geographic coordinates. At that time, Section 73.207 of the FCC Rules specified a minimum distance separation between co-channel Class C and Class A stations of only 222 kilometers and the reference facilities for Class A FM stations were ERP of 3 kW and antenna radiation center HAAT of 100 meters. As the distance between the licensed WDOD-FM site and the channel 243 FM Class A allotment at Harrogate, Tennessee, is 222.5 kilometers, the Channel 243A allotment was fully spaced to WDOD-FM under the FCC rules of the time. The WXJB(FM) licensee, JBD Incorporated, submitted an application for construction permit (FCC File Number BPH-19851114MG) for the Harrogate, Tennessee, channel 243 FM

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<sup>1</sup> First Report and Order, *Implementation of BC Docket 80-90 to Increase the Availability of FM Broadcast Assignments*, Mass Media Docket 84-231, 50 FR 3514, January 25, 1985.

Class A allotment for ERP of 3 kW and antenna radiation center HAAT of 99 meters at the allotment reference coordinates in November 1985.

The channel 243 FM Class A allotment at Harrogate, Tennessee, and the BPH-19851114MG application for construction permit became short-spaced to WOD-FM as a result of FCC action in Mass Media Docket 88-375<sup>2</sup>. Mass Media Docket 88-375 increased the maximum ERP for Class A FM stations to 6.0 kW. It also increased the minimum distance separation requirement in Section 73.207 of the FCC Rules between cochannel Class A and Class C stations from 222 kilometers to 226 kilometers. The WXJB(FM) BPH-19851114MG application for facilities of 3.0 kW ERP, antenna radiation center HAAT of 99 meters, at the allotment reference geographic coordinates was granted in August 1991 under the pre-Mass Media Docket 88-375 minimum distance separation requirements.

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<sup>2</sup> Second Report and Order, *Amendment of Part 73 of the Rules to Provide for an additional FM station class (Class C3) and to Increase the Maximum Transmitting Power for Class A FM Stations*, 66 RR 2d 1473, August 18, 1989.

On August 12, 1992, WXJB submitted an application (FCC File Number BPH-920817IB), requesting operation on channel 243A with ERP of 6.0 kW and antenna radiation center HAAT of 100 meters from the Channel 243A at Harrogate, Tennessee, allotment reference site. This application was filed pursuant to Section 73.215 of the FCC Rules with regard to cochannel stations WDOD-FM and WXCC(FM), Williamson, West Virginia. The August 1992 WXJB Section 73.215 analysis with regard to WDOD-FM incorrectly used the actual WDOD-FM facilities rather than the FM Class C reference facilities, as specified in Section 73.215(b)(2)(ii) of the FCC Rules. A "30-day letter" (Reference Number 1800B3-TT) to this effect was sent to WXJB(FM) from the FCC on December 22, 1992.

On January 30, 1993, WXJB amended its application to specify a directional FM antenna "to maintain radiation in the direction of WDOD FM(sic), Chattanooga, Tennessee to the present 3 kilowatt level"<sup>3</sup> pursuant to Section 73.215 of the FCC Rules. As will be addressed later in this exhibit, the amendment may have been more appropriately submitted pursuant

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<sup>3</sup> Letter from Mitch Sandidge, Mitch Sandidge Broadcast Technical Service, to Ms. Donna Searcy, Secretary, Federal Communications Commission, Paragraph 2, January 30, 1993.

to the grandfathered short-spaced station rules of Section 73.213. Following a “belt and suspenders” approach, this exhibit will address both Section 73.215 and Section 73.213 concerns, leaving the ultimate decision as to the most applicable rule section to the FCC.

The amended WXJB application contained a Section 73.215 analysis with regard to WDOD-FM that clearly showed prohibited overlap between the WDOD-FM FM Class C reference facility (100 kW and antenna radiation center HAAT of 600 meters) interfering 40 dB $\mu$  F(50,10) contour and the proposed WXJB(FM) protected 60 dB $\mu$  F(50,50) contour. Figure 1 of this engineering exhibit is a portion of the Central Mississippi Valley States and Southern Mississippi Valley States USGS 1:2,000,000-scale Nation Atlas series maps upon which the interfering and protected contours of the WDOD-FM FM Class C reference facility and the WXJB(FM) facility proposed in the amended BPH-920817IB application are plotted in accordance with Section 73.215 of the FCC Rules.

Despite this proscribed overlap, the amended WXJB(FM) application was granted on April 8, 1993. The WXJB(FM) application for license (FCC File

Number BLH-940203KB) for the amended application facilities was granted on September 14, 1994, and the Section 73.215 flag in the database set.

Because the instant WDOD-FM application requests a correction of the WDOD-FM site geographic coordinates of two seconds of latitude and six seconds of longitude in the general direction of WXJB(FM), the WDOD-FM proposal would increase the predicted overlap of the between the WDOD-FM FM Class C reference facility (100 kW and antenna radiation center HAAT of 600 meters) interfering 40 dB $\mu$  F(50,10) contour and the proposed WXJB(FM) protected 60 dB $\mu$  F(50,50) contour by approximately 0.1 kilometers, which is within the width of the WDOD-FM FM Class C reference facility interfering contour shown in Figure 1. If deemed necessary, WDOD respectfully requests a waiver of the applicable FCC Rule for this *de minimus* increase in the theoretic overlap between the WDOD-FM FM Class C reference facility (100 kW and antenna radiation center HAAT of 600 meters) interfering 40 dB $\mu$  F(50,10) contour and the proposed WXJB(FM) protected 60 dB $\mu$  F(50,50) contour.

As mentioned earlier, the amended WXJB(FM) application might have been granted more appropriately pursuant to Section 73.213(c)(1) of the FCC



*Rules, Applications For Authorizations Under Requirements Equivalent To Those Of Prior Rules.* As detailed earlier in this exhibit, the Channel 243A allotment at Harrogate, Tennessee, reference site became short-spaced to WDOD-FM as result of the revision of Section 73.207 of the FCC Rules in Mass Media Docket 88-375. The WXJB(FM) amended application specified maximum ERP of 6.0 kW and antenna radiation HAAT of 100 meters at the allotment reference site and proposed use of a directional FM antenna that maintained the ERP in the direction of WDOD-FM to 3.0 kW. The minimum distance separation requirement of Section 73.213(c)(1) between Class A stations and Class C stations is 222 kilometers. The distance between the WXJB(FM) site and the licensed WDOD-FM site is 222.5 kilometers. Thus the WXJB(FM) was fully spaced with regard to WDOD-FM under Section 73.213(c)(1) of the FCC Rules. Since the distance between the WXJB(FM) site and the corrected WDOD-FM site is 222.3 kilometers, the corrected WDOD-FM site is also fully spaced to the WXJB(FM) site under Section 73.213(c)(1) of the FCC Rules.

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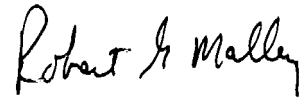
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Station WDOD-FM, Chattanooga, Tennessee

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**CERTIFICATION**

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge. Executed on February 8, 2002.

A handwritten signature in black ink, appearing to read "Robert G. Mallery". The signature is written in a cursive, flowing style.

Robert G. Mallery



