

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
STATE OF FLORIDA) FCC File Nos. 0002066133, 0002063445
Request for Waiver of Section 90.617 of the)
Commission's Rules to Permit Use of 800 MHz)
Public Safety Category Channels on Non-Standard)
Channel Centers)

ORDER

Adopted: January 30, 2007

Released: January 31, 2007

By the Deputy Chief, Policy Division, Public Safety and Homeland Security Bureau:

I. INTRODUCTION

1. We have before us two applications and related waiver requests filed by the State of Florida (Florida).1 Florida requests a waiver of Section 90.617(a)2 of the Commission's Rules, to utilize several 800 MHz Public Safety Category channels on non-standard channel centers,3 each 12.5 kHz separated from, and falling between, the standard public safety channel centers specified in Table 1 of Section 90.617(a) of the Commission's rules.4 In support of its contention that its proposed "offset"5 operations would not cause interference to stations less than 113 kilometers (70 miles) distant, Florida submits an engineering analysis based on Telecommunications Industry Association (TIA) TSB-886 methodology,

1 See FCC File Nos. 0002066133 and accompanying waiver (Mar. 2, 2005) (Lakeland Waiver); 0002063445 (Mar. 1, 2005) and accompanying waiver (proposing to modify WPXE447 by adding sites at Dundee and Ft. Meade, Florida) (Dundee Waiver).

2 47 C.F.R. § 90.617(a).

3 Florida requests the following frequency pairs: 858.9750/813.9750 MHz, 859.9750/814.9750 MHz for the Lakeland site; 856.47500/811.4750 MHz, 858.4750/813.4750 MHz, 859.47500/814.4750 MHz, 860.4750/815.4750 MHz, 860.9750/815.9750 MHz for the Dundee site, and 855.9750/810.9750 MHz for the Ft. Meade site.

4 See Lakeland Waiver at 1; Dundee Waiver at 1. 47 C.F.R. § 90.617(a), Table 1.

5 The term "offset channels" refers to licensees operating on channels centered between regularly assignable channels. See In the Matter of State of Florida Request for Waiver of the Commission's Rules to Permit Licensing of Stations in 800 MHz General Category on Non-Standard Channel Centers, Memorandum Opinion and Order, 16 FCC Rcd 2174 ¶ 1, n.1 (2001) citing Request for Waiver of Part 90 of the Commission's Rules by the County of San Bernardino to Operate a County-Wide Public Safety Communication System in the 800 MHz Band, Memorandum Opinion and Order, 14 FCC Rcd 3830, 3831 n.3 (1989). The signal of an offset channel, introduced into a 25 kHz spacing environment, falls within the receiver passband of stations on the upper and lower standard (25 kHz) spaced channels, thus creating potential co-channel interference to two incumbent stations, whereas standard spaced stations affect only their co-channel counterparts. The Commission's rules do not provide for different separations or establish different desired/undesired signal ratios for offset channels operating in a 25 kHz environment. For example, 47 C.F.R. § 90.621(b)(7) provides that stations operating on offset channels in the Mexico border area "shall be considered co-channel with non-offset frequencies" in the non-border area. See id.

6 TSB-88 is a "technical bulletin describing a methodology for predicting coverage and interference in the

purporting to show that all incumbent co-channel stations are adequately protected against interference.⁷ We find Florida has failed to meet the Commission's established criteria for grant of a waiver, specifically because, without explanation or justification, Florida rests its engineering study on an interference prediction methodology inconsistent with Section 90.621(b) of the Commission's Rules.⁸ Because Florida has not justified the short-spacing, we are dismissing its waiver request for "offset" short-spaced channels, and dismissing the associated applications.

II. BACKGROUND

2. Florida seeks a waiver of Section 90.617 of the Commission's Rules to use 12.5 kHz "offset" channels at three sites: Lakeland, Dundee, and Fort Meade.⁹ At the Lakeland site, Florida claims that its TSB-88 analysis of its proposed offset frequencies indicates a zero percent probability of interference to all but two incumbent licensees, the City of Apopka, Florida and Pinellas County, Florida. It claims that there is a 0.36% probability of interference to the Apopka station and that Florida and the City have "mutually agreed that the interference is acceptable," and the City of Apopka has given Florida a conditional letter of consent to that effect, stating, however, "that interference outside this predicted boundary [used in the Florida study] may not be acceptable to the City of Apopka and mitigation may be required of the State of Florida should such interference occur."¹⁰

3. Florida claims that its proposed offset operations would increase the interference potential to Pinellas County's station KNJH386 by only 0.03% from its proposed site 81.3 km from the Lakeland site and by only 0.47% from its other proposed offset operation 72.5 km from the Lakeland site.¹¹ Florida states that it provided Pinellas County with a copy of its application but that Pinellas County did not agree to accept the increased interference.¹² Nonetheless, Florida argues that the Commission should ignore the increase in potential interference to KNJH386 because the station is licensed to serve only a "Countywide" area and because the predicted interference area would be less than one-half of one percent of the total service area at locations well-removed (approximately 17 km) from the Pinellas County borders.¹³

4. Florida's TSB-88 interference study of the purported effect of its proposed Dundee and Fort

(...continued from previous page)

narrowband spectrum environment that the Commission created for Private Land Mobile Radio Services (PLMRS) stations operating below 512 MHz." (emphasis added.) See State of Maryland, *Memorandum Opinion and Order*, DA 06-2104 ¶ 6 (PSHSB 2006). As a general matter, "the TSB 88 methodology is used by frequency coordinators and others to determine channel availability in the PLMRS bands below 512 MHz based on predicted contours, *i.e.*, TSB 88 is used to ensure that the predicted interference contour of a proposed station does not impinge on the service contours of co-channel and adjacent channel stations." *Id.* citing TSB-88-B-1, *Wireless Communications Systems – Performance in Noise and Interference – Limited Situations – Recommended Methods for Technology-Independent Modeling, Simulation, and Verification* (May 2005). This iteration of TSB 88 supersedes other earlier versions, including TSB 88 (January 1998), TSB-88-1 (December 1998), TSB-88-A (June 1999), TSB-88-A-1 (January 2002), and TSB-88-B (September 2004).

⁷ See Lakeland Waiver at 4; Dundee Waiver at 4.

⁸ 47 C.F.R. § 90.621(b).

⁹ See Lakeland Waiver at 1; Dundee Waiver at 1.

¹⁰ See Letter from Richard D. Anderson, City Administrator, City of Apopka to Tom Brooks, P.E. JTF System Manager, State Technology Office (dated Jan. 10, 2004).

¹¹ See Lakeland Waiver at 1; Interference Study at 4.

¹² See Lakeland Waiver at 1.

¹³ See *id.* at 1, Interference Study at 4-5.

Meade offset operations “shows that the proposed operations would cause no probability of harmful interference to any non-State incumbent.”¹⁴ The interference analysis does show predicted interference to the State’s own stations, but Florida deems that acceptable.¹⁵ It also observes that the Commission has previously granted 12.5 kHz offset waivers in Florida in the same area in which Florida is requesting its instant waiver.

III. DISCUSSION.

5. Section 1.925 of the Commission’s rules states that a waiver request may be granted upon a showing that: (1) the underlying purpose of the rule would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (2) in view of unique or unusual factual circumstances of the instant case, application of the rule would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.¹⁶ We are unable to conclude that Florida has met the waiver criteria because its reliance on the TSB88 propagation model conflicts with Section 90.621(b) of the Commission’s Rules. We therefore must deny Florida’s waiver request and are dismissing the underlying applications.

6. Section 90.621(b) of the Commission’s Rules establishes co-channel interference protection in the 800 MHz band based on a fixed distance separation criterion, *i.e.* co-channel Public Safety sites must be separated by at least 113 kilometers (70 miles).¹⁷ However, Section 90.621(b)(4) does permit shorter spacings of less than 113 kilometers (70 miles) but no less than 88 kilometers (55 miles) if the applicant proposes power and antenna height reductions consistent with the cited rule’s Short-Spacing Separation Table.¹⁸ The Short-Spacing Separation Table’s parameters were derived using the Commission’s R-6602 800 MHz signal and interference field curves and are premised on the interference contour from a proposed station not exceeding 22 dB μ V/m at the 40 dB μ V/m service contour of a co-channel station, *i.e.* an 18 dB desired to undesired signal ratio.¹⁹ Spacings less than 88 km (55 miles) are considered only if the applicant submits a waiver request that must include “an interference analysis, based upon any of the generally-accepted terrain-based propagation models, that shows that co-channel stations would receive the same or greater interference protection than provided in the table.”²⁰ The short-spacing table minima may be exceeded however, if the applicant “submits with its application letters of concurrence indicating that the applicant and each co-channel licensee within the specified separation agree to accept any interference resulting from the reduced separation between their systems.”²¹

7. Florida has not shown that the Commission’s interference protection rules would be frustrated or not served absent Commission acceptance of Florida’s non-standard interference analysis. It has pointed to no unique circumstances in Florida that would warrant the Commission accepting TSB-88 interference prediction methodology despite the Commission’s statement in the *800 MHz R&O* that “although we believe that some parts of TSB-88A might be useful in 800 MHz interference analysis, *e.g.*

¹⁴ See Dundee Waiver at 3, Interference Study at 5.

¹⁵ See Dundee Waiver at 3, Interference Study 5.

¹⁶ 47 C.F.R. § 1.925(b)(3).

¹⁷ *Id.*

¹⁸ 47 C.F.R. § 90.621(b)(4) Short-Spacing Separation Table, n.2.

¹⁹ In the Matter of Co-Channel Protection Criteria for Part 90, Subpart S Stations Operating Above 800 MHz, *Report and Order*, 8 FCC Rcd 7293, 7294 ¶¶ 5, 7 (1993) (*Part 90 Co-Channel Protection R&O*).

²⁰ 47 C.F.R. § 90.621(b)(4).

²¹ 47 C.F.R. § 90.621(b)(5)

the document's discussion of coverage reliability; we do not think it wholly applicable to the environment in which 800 MHz public safety systems operate."²² Florida did not submit unconditional letters of concurrence even from those licensees it deemed affected by its proposal much less the incumbents the Commission identified, *infra*, as actually affected.

8. We do not agree with Florida that we should ignore predicted interference to incumbent licensees and limit their interference-free service to an area defined by what Florida considers to be the limits of the incumbents' jurisdictional boundaries. There is no such limitation on stations' service areas in the Commission's rules and Florida has cited no precedent in which a co-channel waiver has been granted on such an unsupported theory.

9. Additionally, our engineering staff conducted an independent analysis of the interference potential of Florida's Lakeland, Dundee and Fort Meade sites using the R-6602 Curves that formed the basis of the Section 90.621(b) Short Spacing Separation Table. This analysis shows that, contrary to Florida's non-standard TSB-88 analysis, its proposed offset stations would in fact cause interference to the incumbents listed below:

Offset Frequency (MHz)	Florida Site	Standard Frequency (MHz)	Incumbent Call Sign	Incumbent Licensee	Incumbent Site Name	Distance to FL Site (km)
858.9750	Lakeland	858.9875	KNJH386	Pinellas, County of	Tarpon Springs	72.5
859.9750	Lakeland	859.9875	KNJH386	Pinellas, County of	Tarpon Springs	72.5
856.4750	Dundee	856.4625	WNFW605	Seminole County Telecommunications	Forest City	75.1
858.4750	Dundee	858.4625	WNFW605	Seminole County Telecommunications	Forest City	75.1
859.4750	Dundee	859.4625	WNFW605	Seminole County Telecommunications	Forest City	75.1
860.4750	Dundee	860.4625	WNFW605	Seminole County Telecommunications	Forest City	75.1
860.9750	Dundee	860.9625, 860.9875	WNFW605	Seminole County Telecommunications	Forest City	75.1
855.9750	Fort Meade	855.9875	WNKA279	Manatee, County of	Bradenton	72.9

10. In sum, we find that, because of Florida's inappropriate use of TSB-88 methodology, it has significantly understated the actual effects of its proposal on incumbent licensees. Accordingly, it has not provided a factual basis that would support its contention that its proposed offset operation could be implemented without impairing the adjacent channel stations' ability to provide interference free public safety communications service to first responders. We thus are denying the requested waiver and dismissing the related applications without prejudice to Florida filing new applications for offset channels that comport with Section 90.621(b) of the Commission's rules.²³

²² See *Improving Public Safety Communications in the 800 MHz Band*, WT Dkt No. 02-55, *Report and Order*, Fifth *Report and Order* and *Fourth Memorandum Opinion and Order*, and *Order*, 19 FCC Red 14969, 15038 ¶ 125 (2004) as amended by *Erratum*, 19 FCC Red 19651 (2004), and *Erratum*, 19 FCC Red 21818 (2004) (*800 MHz R&O*).

²³ See 47 C.F.R. § 1.925(c)(ii).

IV. ORDERING CLAUSE

11. IT IS ORDERED pursuant to Sections 4(i) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r), and Sections 0.392, 1.3 and 1.925 of the Commission's Rules, 47 C.F.R. §§ 0.392, 1.3, 1.925, that the Requests for Waiver to Operate on 12.5 kHz Offset Channels filed by the State of Florida on March 1, 2005 and March 2, 2005, in association with FCC File Nos. 0002066133 and 0002063445, ARE DENIED, and the applications, FCC File Nos. 0002066133 and 0002063445 ARE DISMISSED.

12. This action is taken under delegated authority pursuant to Sections 0.191 and 0.392 of the Commission's Rules, 47 C.F.R. §§ 0.191, 0.392.

FEDERAL COMMUNICATIONS COMMISSION

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