

## W241CH Supplement to Waiver Request

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This W241CH Supplement to Waiver Request is in support of Exhibit 12E, the “IF Interference Statement and Request for Waiver of 47 CFR Section 74.1204(g)” contained in the W241CH minor modification application (FCC File No. BPFT-20170616AAU).

A waiver of Section 74.1204(g) is requested to achieve the Commission’s goal of maintaining uniform IF protection<sup>1</sup> while at the same time enhancing service to the public.

### INTRODUCTION

Section 1.3 of the Commission’s rules states that rule provisions may be waived “for good cause shown.” Section 73.3566(a) of the Commission’s rules provides that requests for waiver “shall show the nature of the waiver or exception desired and shall set forth the reasons in support thereof.” The Media Bureau utilizes a case-by-case analysis governed by decisional precedent.<sup>2</sup>

In a rule applicable to wireless services, Section 1.925(b)(3) of the Commission’s rules contains a rules-based standard providing that:

The Commission may grant a request for waiver if it is shown that:

- (i) The underlying purpose of the rule(s) 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
- (ii) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.

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<sup>1</sup> *Third Report and Order*, 4 FCC Rcd 3557, 3560 (1989) (hereafter “*Third Report and Order*”), *recon. denied*, Memorandum Opinion and Order, 5 FCC Rcd 3715 (1990).

<sup>2</sup> *See Northeast Cellular Telephone Co. v. F.C.C.*, 897 F.2d 1164, 1166 (D.C. Cir. 1990). *See also WAIT Radio v. F.C.C.*, 418 F.2d 1153, 1157-59 (D.C. Cir. 1969) (“a waiver is appropriate only if special circumstances warrant a deviation from the general rule and such deviation will serve the public interest”).

**THE REQUESTED WAIVER WILL SERVE THE UNDERLYING PURPOSE OF THE COMMISSION’S RULES**

As stated in the introductory paragraph to the *Third Report and Order*, the underlying purpose of Section 74.1204(g) of the Commission’s rules is to “provide a uniform level of protection for FM receivers from intermediate frequency (IF) interference” by preventing overlap of IF-related stations predicted 36 mV/m median field strength contours.<sup>3</sup> In the same introductory paragraph, the Commission described its careful circumscribing of the prohibitions as “a reasonable standard that will preclude only those channel allocations and station assignments likely to result in IF interference (emphasis added).”<sup>4</sup>

As shown in the requested waiver, Section 74.1204(g) as applied to the unique facts present here, fails to provide a uniform protection as in the W241CH situation it greatly and grossly overprotects receivers from IF interference, and precludes a station assignment that is absolutely unlikely based upon the uniform level of protection adopted to result in IF interference. Accordingly, a waiver of Section 74.1204(g) here with respect to W241CH will serve the underlying purpose of the Commission’s rule.

**IN THE UNIQUE FACTUAL CIRCUMSTANCES OF THE INSTANT CASE, THE STRICT APPLICATION OF THE RULE IS INEQUITABLE AND CONTRARY TO THE PUBLIC INTEREST**

As shown in the W241CH waiver request, had the maximum ERP for Class A FM stations remained at 3 kilowatts, the IF spacing distance for the W241CH application would have been met with the distance of 14 kilometers. As further shown in the W241CH waiver request, the power increase for Class A FM stations changing the IF spacing is absolutely irrelevant to the situation of the W241CH FM translator application. There is no situation for W241CH where it could possibly have more potential for IF interference than a 3 kilowatt ERP/100 meter HAAT Class A FM station which had an IF spacing requirement of 14 kilometers.

Attached to this Supplement is an “FM Translator IF Interference Protection Illustration” showing that under no circumstances could an overlap of the 36 mV/m contours occur if the requested W241CH waiver is granted. Rather, even applying the Class A 3 kilowatt spacings and even if W241CH employed a height of 1600 meters HAAT with 250 watts (which it is not – it is requesting an HAAT far below 1600 meters), there is a .97 kilometer buffer before the 36 mV/m contours of W241CH and the relevant Class B station would overlap.

Thus, enhanced service to the public will be denied by the arbitrary application of Section 74.1204(g) to this W241CH power increase. Rather than meeting the spacing requirements for a 6 kilowatt Class A FM, the W241CH power increase meets the former spacing requirements of a 3 kilowatt Class A FM station but as shown in the waiver

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<sup>3</sup> *Third Report and Order*, 4 FCC Rcd at 3557, paragraph 1.

<sup>4</sup> *Id.*

request, fulfills the underlying purpose of the rule in providing a uniform level of protection for FM receivers.

### **THE REQUESTED WAIVER WILL SERVE THE PUBLIC INTEREST**

The requested waiver of Section 74.1204(g) will serve the public interest in the following ways:

- The population served by the W241CH 60 dB $\mu$  contour will increase from 587,176 persons to 767,020 persons<sup>5</sup>
- Radio listeners to WURD, the W241CH primary station, will be served with a more consistent and reliable day and night signal (WURD is a Class D AM station with extremely limited nighttime power)
- Radio listeners to WURD will enjoy a higher fidelity, more static-free listening experience
- The FCC's goals of AM revitalization will be better served

### **LEGAL BASIS FOR WAIVER**

The FCC's Audio Division has previously granted a similar waiver for FM translator station W245AJ in FCC File No. BPFT-20160707AAM. In the W245AJ waiver, the applicant pointed out that the underlying purposes of Section 74.1204(g) would be served. Although the IF spacing between W245AJ and the subject station was 8.9 kilometers rather than the required 10 kilometers, the grandfathered short-spacing rules in Section 73.211(c)(1) specified a minimum separation of 8 kilometers between Class A stations not exceeding the equivalent of 3 kilowatts ERP at 100 meters HAAT. The W245AJ ERP power/height combination was far less than 3 kilowatts ERP at 100 meters HAAT. Thus, rather than grossly overprotecting for IF in the W245AJ application, the Commission waived Section 74.1204(g) in favor of uniform protection by honoring the applicants' request to substitute one spacing table in Part 73 for the spacing table more suitable for the W245AJ situation. The public interest was served by a grant of the W245AJ IF spacing waiver by the substantial increase in coverage area afforded to W245AJ.

Similarly with W241CH, rather than overprotecting through the use of the 6 kilowatt Class A spacings, it is requested that the Commission waive Section 74.1204(g) to apply a more uniform protection by likewise applying the spacing table applicable to 3 kilowatt Class A station in Section 73.211(c)(1). As shown above, there is no instance in which the IF protection needed by the W241CH application comes close to the distances required for 6 kilowatt Class A stations.

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<sup>5</sup> 2010 US Census Block data.

The history of the FCC's IF protection standards supports the W241CH waiver request. IF spacing standards were originally adopted in *Amendment of Section 73.207, Concerning Minimum Required Spacings Between FM Broadcast Stations to Provide for IF Interference Protection*, Report and Order, Docket No. 15934, FCC 65-575, released July 2, 1965. The *Third Report and Order* increased IF spacings for Class A stations based upon the 3 kilowatt to 6 kilowatt power increase. No change was made to maximum FM translator power. Yet, by default, because Section 74.1204(g), the FM translator IF spacing rule, is based upon the Class A spacing rules, the IF spacings for FM translator stations were also increased.

It is noteworthy that Canada has no IF spacing restrictions for its FM band.<sup>6</sup> While there is no question but that evidence regarding the quality of US receivers manufactured decades ago prompted the FCC then to adopt IF protections,<sup>7</sup> it must be now questioned whether FM signal propagation and radio receivers are that much different north of the border, or whether perhaps as a larger matter, IF spacing restrictions for the United States are an antiquity that should be re-examined.<sup>8</sup>

This W241CH waiver request does not seek a wholesale re-examination of IF spacing restrictions. Rather, it simply seeks to have applied to the W241CH application the "uniform level of protection" called for by the *Third Report and Order*.

## CONCLUSION

For the FCC's multiple goals of: maintaining a uniform IF protection while also enhancing service to the public; bringing reliable and consistent service to AM listeners under AM revitalization; and enabling radio service to increased populations, a grant of the requested W241CH waiver will serve the underlying purposes of Section 74.1204(g) of the Commission's rules.

The strict application of Section 74.1204(g) would be inequitable to W241CH and would fail to serve the public interest. Accordingly, a waiver of Section 74.1204(g) of the Commission's rules is respectfully requested.

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<sup>6</sup> See e.g. <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01153.html#s3.4>.

<sup>7</sup> See *Third Report and Order*, 4 FCC Rcd at 3558-59.

<sup>8</sup> It is evident that possibly the best real-world laboratory for such a re-examination of IF spacing standards would be a field trip to our northern neighbor, preferably during a temperate time of year, to do an in-depth study of modern FM receivers and the impact that IF spaced FM stations have upon radio reception.

## FM Translator IF Interference Protection Illustration

The Commission has established minimum distance separations between IF-related stations to avoid overlap of the 36 mV/m (91.1 dBu) field strength contours. The underlying policy is discussed in detail in the *Third Report and Order* in MM Docket 89-62 released April 10, 1989. See Paragraph 23 of that document.

Please note that the 36 mV/m contour radius of an FM Translator will never exceed 3.01 km, even at maximum power of 0.25 kW and maximum HAAT of 1600 meters. This is less than the maximum 36 mV/m contour radius of a Class A station operating with 3 kW at an HAAT of 100 meters, as illustrated below. Therefore, the 3 kW distance separations shown in 73.213 (formerly listed under 73.207 before Class A stations were allowed 6 kW) are sufficient to avoid IF interference regardless of a translator's specific facilities.

