

WURD Radio, LLC
FM Translator W241CH, Philadelphia, PA – Facility ID 138914
June 2017 Application for Minor Change Construction Permit

Exhibit 12E – IF Interference Statement and Request for Waiver of
47CFR§74.1204(g)

The increase in effective radiated power ("ERP") proposed in this application requires consideration of any local FM station 53 or 54 channels removed from the translator. A 10.6 or 10.8 MHz difference in frequency has potential to cause Intermediate Frequency ("IF") interference on certain receivers unless a sufficient distance between transmitters is maintained.

The only IF-related station within the range of interest is WKVP, Camden, NJ, Facility ID 20842, which operates on Channel 295B at a site 13.65 kilometers southeast of W241CH. In accordance with §73.208(c), this distance rounds to 14 kilometers. The rounded spacing between W241CH and WKVP is 1 kilometer less than the Class A to Class B ("A to B") minimum requirement of 15 kilometers specified in Table A of §73.207(b)(1).

To allow the proposed power increase, WURD Radio, LLC respectfully requests a minor waiver of §74.1204(g) to apply the "A to B" 10.6/10.8 MHz distance separation requirement of 14 kilometers which took effect May 17, 1989¹ -- and would *still* be in effect under §73.207 if the maximum ERP limit for Class A stations had remained at 3000 watts². The Class A IF separation requirements listed in the May 1989 §73.207(b)(1) table were moved to §73.213(c)(1) on October 2, 1989 and remain applicable to Class A stations operating with no more than 3000 watts ERP and 100 meters antenna HAAT, or equivalent lower ERP and higher antenna HAAT based on a class contour distance of 24 km.

¹ See Appendix A of the *Third Report and Order* in MM Docket No. 86-144, FCC 89-62, 4 FCC Rcd No. 9. For the convenience of processing staff, a copy has been attached as an Exhibit.

² The maximum allowable power for Class A FM stations was subsequently increased to 6000 watts on October 2, 1989. The slight increase in IF separation distances that also took effect on that date has an unintended impact on FM Translator siting, for which we now seek relief. See the *Second Report and Order* in MM Docket 88-375, FCC 89-232, 4 FCC Rcd No. 17.

We note that the MM Docket 86-144 proceeding established a uniform level of protection against IF interference based on avoidance of overlap of the predicted 36 mV/m (91.1 dBu) contours of IF-related stations. The 36 mV/m contour of a Class A station operating with 3000 watts ERP at 100 meters above average terrain has a radius of 3.98 kilometers, but an FM translator operating in the "worst-case scenario" of 250 watts ERP at 1600 meters above average terrain would have a 36 mV/m contour radius of only 3.01 kilometers³. There is simply no situation in which an FM Translator would have more potential for IF interference than a 3000 watt/100 meter Class A FM station at the same location, including the present site of W241CH. Therefore, a showing of IF spacing compliance based on the 3000 watt Class A requirement shown in the 1989 edition of §73.207(b)(1) Table A -- now included in the Rules under §73.213(c)(1) -- provides an ample safeguard against actual interference and would allow W241CH to improve coverage while remaining at its present site. A waiver granted on this basis would be consistent with the Commission's stated desire to maintain uniform IF protection⁴. We find no valid reason to hold 250 watt FM Translators to the unnecessarily restrictive 6000 watt IF distance separation requirement, when the 3000 watt table is still included in the Rules and can be referenced by applicants and processing staff just as easily.

The requested waiver would clearly serve the public interest, as it would permit W241CH to increase its 60 dBu coverage population from 587,176 persons to 767,020 persons⁵ and provide improved reception of the programming carried on WURD, a limited night power Class D AM facility.

³ These distances were determined with the FCC Media Bureau "FM and TV Propagation Curves" online tool.

⁴ *Third Report and Order* in MM Docket No. 86-144 at Paragraph 23.

⁵ 2010 US Census Block data.