

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

In the Matter of)
ASSOCIATION OF AMERICAN RAILROADS) WT Docket No. 14-98
Request for Waiver of Sections 90.261(f) and)
90.219(d)(3) of the Commission's Rules)

ORDER

Adopted: October 28, 2014

Released: October 29, 2014

By the Deputy Chief, Mobility Division, Wireless Telecommunications Bureau:

1. Introduction. On June 13, 2014, the Association of American Railroads (AAR) filed a request for waiver concerning use of signal boosters to maintain communications between the front and rears of trains. Specifically, AAR seeks waiver of Sections 90.219(d)(3) and 90.261(f) to allow use of frequencies from 452/457.900 MHz to 452/457.96875 MHz for signal boosters with an effective radiated power (ERP) of thirty watts in areas where coverage is unsatisfactory due to distance or intervening terrain barriers. For the reasons set forth below, we grant AAR's request for waiver, subject to certain conditions.

2. Background. Section 90.219(d)(3) of the Commission's Rules limits the ERP of Part 90 signal boosters to five watts. Section 90.261 of the Commission's Rules generally permits fixed use of 450-470 MHz frequencies on a secondary basis to land mobile operations, but Section 90.261(f) excludes specific frequencies, including 452/457.925 MHz to 452/457.96875 MHz.

3. AAR explains that safe, efficient movement of trains relies on communications links between the fronts and rears of trains to monitor speed and brake pressure; operate rear end brakes; and, on trains with distributed power, coordinate the front and rear engines. It states that the options currently permitted by the Commission's Rules do not provide sufficient coverage to maintain this communications link on long trains in areas of challenging terrain, and that trackside signal boosters are needed to maintain the communications link.

1 Request for Waiver of Sections 90.261(f) and 90.219(d)(3) of the Commission's Rules (filed July 13, 2014) (Waiver Request).

2 Specifically, frequencies 452/457.900, 452/457.90625, 452/457.9125, 452/457.91875, 452/457.925, 452/457.93125, 452/457.9375, 452/457.94375, 452/457.950, 452/457.95625, 452/457.9625, and 452/457.96875 MHz. AAR is the mandatory certified frequency coordinator for these frequencies. See 47 C.F.R. § 90.35(b)(2)(iv), (b)(3).

3 Waiver Request at 1-4.

4 See 47 C.F.R. § 90.219(d)(3).

5 See 47 C.F.R. § 90.261(f).

6 See Waiver Request at 2-3.

7 Id. at 3-4.

4. MRFAC, Inc. (MRFAC), the only commenter in response to the *Public Notice* regarding AAR's waiver request,⁸ generally supported the request but expressed concern that the proposed operations could cause interference to adjacent-channel operations above 452/457.96875 MHz and below 452/457.9000 MHz.⁹ It requested that operation under the waiver be limited to remote locations, and prohibited in railroad yard or terminal areas.¹⁰ AAR objected to the proposed condition, explaining that while in most cases the signal boosters would be used in remote areas of rugged terrain, rail yard and terminal areas can contain challenging terrain, such as hills, overpasses, and other obstacles, that obstruct communications between the front and rear of trains.¹¹ In addition, AAR argued that the proposed condition is not needed to avoid interference to other users because the channels at the edge of the railroad frequencies (452/457.900 MHz and 452/457.96875 MHz) are not used for communications between the fronts and rears of trains.¹² It also stated that railroads would use only single-channel Class A signal boosters, further reducing out-of-band emissions to adjacent frequencies.¹³

5. *Discussion.* Section 1.925(b)(3) of the Commission's Rules provides that we may grant a waiver if it is shown that (a) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and grant of the requested waiver would be in the public interest; or (b) in light of unique or unusual circumstances, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.¹⁴ We conclude that grant of the waiver request is warranted, subject to certain conditions.

6. The purpose of Section 90.261 is to provide some needed spectrum for fixed operations while, at the same time, ensuring that the 450-470 MHz band is used primarily for mobile operations.¹⁵ The purpose of the exclusion of certain frequencies in Section 90.261(f) from use for full-power fixed operations is to reserve those frequencies for other specialized uses.¹⁶ We agree with AAR that allowing railroads to use these frequencies for signal boosters supports the specialized railroad use for which the frequencies are designated.¹⁷ We also agree with AAR that the purpose of limiting Part 90 signal boosters to five watts ERP – to reduce the potential for interference to other users¹⁸ – would not be served by

⁸ See Wireless Telecommunication Bureau Seeks Comment on Association of American Railroads Request for Waiver to Permit Signal Boosters with Increased Power on Certain 450 MHz Band Railroad Frequencies, *Public Notice*, WT Docket No. 14-98, 29 FCC Rcd 7817 (WTB MD 2014).

⁹ See MRFAC comments at 2-3.

¹⁰ *Id.*

¹¹ See AAR reply comments at 3.

¹² *Id.* at 2.

¹³ *Id.* at 3. Class A signal boosters amplify only those discrete frequencies intended to be retransmitted, while Class B signal boosters amplify all signals within the signal booster's passband. 47 C.F.R. § 90.7.

¹⁴ 47 C.F.R. § 1.925(b)(3); see also *WAIT Radio v FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

¹⁵ Amendment of Part 90 Concerning Secondary Fixed Operations in the 450-470 MHz Band, *Report and Order*, PR Docket No. 91-66, 7 FCC Rcd 3498, 3498 ¶ 2 (1992).

¹⁶ See Amendment of Part 90 Concerning Secondary Fixed Operations in the 450-470 MHz Band, *Notice of Proposed Rule Making*, PR Docket No. 91-66, 6 FCC Rcd 1800, 1802 n.22 (1991).

¹⁷ See Waiver Request at 5.

¹⁸ See Amendment of Parts 1, 2, 22, 24, 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage Through the Use of Signal Boosters, *Report and Order*, WT Docket No. 10-4, 28 FCC Rcd 1663, 1718 ¶ 153 (2013).

application of the rule because the potential victim frequencies are used for railroad communications so the railroads have an interest in minimizing interference on these frequencies.¹⁹

7. In order to address concerns about interference to non-railroad frequencies, and consistent with AAR's representations, we exclude the channels at the edge of the railroad frequencies (452/457.900 MHz and 452/457.96875 MHz) from the scope of the waiver; the waiver applies only to frequencies from 452/457.90625 to 452/457.9625. In addition, operations pursuant to this waiver must utilize only single-channel Class A signal boosters. Subject to these conditions, we grant the waiver request.

8. Accordingly, IT IS ORDERED, pursuant to Sections 4(i) and 303(i) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(i), and Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, that the Request for Waiver filed by the Association of American Railroads on June 13, 2014, IS GRANTED to the extent indicated herein.

9. This action is taken under delegated authority pursuant to Sections 0.131 and 0.331 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Scot Stone
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¹⁹ See Waiver Request at 5-6.