

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554**

In the Matter of)
)
Improving Public Safety Communications in the) ET Docket No. 02-55
800 MHz Band)
)
Consolidating the 800 and 900 MHz Industrial/Land)
Transportation and Business Pool Channels)

To: The Federal Communications Commission

**PETITION FOR RECONSIDERATION
OF THE
AMERICAN PETROLEUM INSTITUTE
AND THE
UNITED TELECOM COUNCIL**

The American Petroleum Institute, by its attorneys, and the United Telecom Council (collectively, “Joint Petitioners”), pursuant to Section 1.429 of the Rules and Regulations of the Federal Communications Commission (“FCC” or “Commission”), hereby submit this Petition for Reconsideration of the interim interference protection standards adopted in the *Supplemental Order and Order on Reconsideration* (“*Supplemental Order*”) released in the above-captioned proceeding on December 22, 2004.¹ In this Petition, Joint Petitioners request: that the Commission apply the same interim interference protection standards to *all* licensees in the 800 MHz private land mobile band; that it (at the very least) treat public safety and critical infrastructure industry (“CII”) entities alike vis-à-vis interim protection; and that it adopt rules to

¹ 70 Fed. Reg. 6757 (Feb. 8, 2005). Improving Public Safety Communications in the 800 MHz Band, Supplemental Order and Order on Reconsideration, WT Docket No. 02-55, FCC 04-294 (2004) (“*Supplemental Order*”).

ensure that the most egregious interference problems will be addressed during the rebanding transition period.

I. INTRODUCTION

1. The American Petroleum Institute (“API”) is a national trade association representing approximately 400 companies involved in all phases of the petroleum and natural gas industries, including the exploration, production, refining, marketing and transportation of petroleum, petroleum products and natural gas. The API Telecommunications Committee is one of the standing committees of the organization’s General Committee on Information Management & Technology. The Telecommunications Committee is supported and sustained by companies that are authorized by the Commission to operate telecommunications systems in various of the licensed radio services, including extensive operations in the 800 MHz Private Land Mobile Radio Services (“PLMRS”). These systems are used to support the search for and production of oil and natural gas, to ensure the safe pipeline transmission of natural gas, crude oil and refined petroleum products, to process and refine these energy sources and to facilitate their ultimate delivery to industrial, commercial and residential customers. Due to the critical importance of 800 MHz systems to the operations of its members, API has been an active participant in this proceeding, both in its individual capacity and as a member of the Private Wireless Coalition, the Land Mobile Communications Council and the CI Reply Coalition.

2. Since 1948, the United Telecom Council (UTC) has been the national representative on communications matters for the nation’s electric, gas and water utilities and natural gas pipelines. Approximately 600 such entities currently are members of UTC, ranging in size from large combination electric-gas-water utilities that serve millions of customers, to smaller, rural electric cooperatives and water districts that serve only a few thousand customers

each. Together with its affiliated association members, UTC represents the telecommunications and information technology interests of virtually every utility and pipeline in the country, as well as those of other entities identified by the FCC as CII. Like API, UTC has been an active participant in this proceeding for more than three years, including representation of CII as a member of the Commission's Transition Administrator Search Committee.

II. DISCUSSION

3. The Commission's initial *Report and Order* ("*Order*") in this proceeding provided that non-cellular 800 MHz licensees operating below 816.35/861.35 MHz will be entitled to protection from harmful interference if the median power of their received signal is equal to or greater than -104 dBm for vehicular mobile units or -101 dBm for portable (hand-held) units. *Order* at ¶105. However, in response to Nextel's argument that these standards are "not practicable" until rebanding is completed, the Commission adopted "interim" interference standards in its *Supplemental Order* that are to apply before and during the rebanding process. To be entitled to interference protection under the "interim" standards, licensees must meet a minimum signal strength threshold of -88 dBm (mobile) or -85 dBm (portable). *Supplemental Order* at ¶ 39.

4. Certain additional interim protections were adopted only for public safety licensees. In particular, in cases where a public safety licensee does not meet the interim threshold values, but does meet the threshold values adopted in the *Order* (*i.e.*, the $-101/-104$ values), the following provisions will apply:

- The commercial carrier(s) responsible for the interference must mitigate the interference on public safety control channels (up to four channels) such that the public safety receiver maintains a minimum C/(I+N) of 17 dB;
- The commercial carrier(s) must exercise "best efforts" to mitigate interference on the

public safety system's voice channels so that the public safety receiver maintains a minimum $C/(I+N)$ of 17 dB; and

- If the commercial carrier is unable to mitigate interference to a public safety system's voice channels, the carrier must provide a report to the public safety licensee demonstrating why mitigation is not practicable, and the public safety licensee may then request that the Transition Administrator facilitate mandatory mediation between the parties, with a subsequent right to seek relief from the Commission if the mediation is unsuccessful.

Supplemental Order at ¶ 42.

5. For the reasons discussed below, Joint Petitioners do not believe that the Commission's new interim standards will provide adequate protection to *non*-public safety licensees, including CII entities that use their 800 MHz systems to serve vital safety-related functions. To provide greater interim protection, without placing an undue burden on Nextel or other commercial providers, Joint Petitioners urge the Commission to: (1) provide all 800 MHz PLMRS licensees with the same interim interference protection as public safety licensees; (2) at the very least, treat CII licensees equivalent to public safety entities; and (3) clarify that licensees should be entitled to interim interference protection in situations where they can demonstrate that, even if they upgraded their equipment to meet the interim standards, they would still be receiving harmful interference.

A. All PLMRS 800 MHz Licensees Should be Entitled to the Same Interim Interference Protection Standards that Have Been Adopted for Public Safety Entities

6. The practical effect of the Commission's interim interference standards is that many *non*-public safety high-site system operators will be ineligible to seek recourse for interference problems occurring in the outer portions of their protected service areas. For purposes of frequency coordination in the 800 MHz band, a licensee's service contour typically is considered to extend to the point where the field intensity drops to +40 dBu. The

Commission's interim received signal level thresholds of -88/-85 dBm translate into estimated field intensities of +45.5 dBu for mobiles and +48.5 dBu for portables.² Thus, it generally will be the case that licensees will be ineligible for interim protection in the substantial part of their service area where field intensity is between +40 dBu and +45.5/48.5 dBu (as well as in the area where field intensity is between +30 dBu and +40dBu, which typically is considered a usable part of the licensee's service area). Joint Petitioners further believe that the risk that harmful interference will occur during the rebanding process is heightened as a result of the Commission's decision in its *Supplemental Order* not to require frequency coordination in connection with applications for channel modification that are necessitated by band reconfiguration. *Supplemental Order* at ¶¶ 60 and 64-67.

7. The Commission's decision to extend additional interim protections to public safety licensees (see ¶ 4, *supra*) stems from its belief that implementation of the -88/-85 dBm interim threshold, in itself, will not provide adequate protection against interference.³ It stands to reason, however, that if the interim standards are inadequate with respect to public safety licensees, they also will not adequately protect other types of licensees -- including some that (like public safety licensees) use their systems for important safety-related functions. Extending the additional interim protections to *all* licensees would establish an equitable baseline of protection without imposing as great a burden on commercial carriers as would implementation during the transition period of the interference protection standards adopted in the *Order* (*i.e.*, the -101/-104 dBm threshold values).

² In calculating these conversions, Joint Petitioners assumed the use of 5/8 wavelength antennas by mobile units and the use of dipole antennas for portable operations.

³ In fact, the Commission explicitly states that it "do[es] not believe that the interim levels, alone, will provide sufficient interference protection for public safety communications." *Supplemental Order* at ¶ 42.

8. In its *Supplemental Order*, the sole reason that the Commission provides for declining to extend to CII licensees (and, presumably, others as well) the same additional interim protections as are being made available to public safety licensees is the assertion that CII licensees “generally have greater access to funds sufficient to improve signal strength than public safety entities which operate on an appropriated funds basis.” *Supplemental Order* at ¶ 43. The Commission’s suggestion that non-public safety licensees can simply upgrade their equipment in order to receive interim interference protection is flawed for several reasons.

9. To begin with, like public safety licensees, CII entities (and other PLMRS licensees) do in fact face substantial budgetary constraints that limit their ability to implement system upgrades. As the Commission is well aware, private radio systems typically do not constitute a source of revenue for those who own and operate them. Rather, these systems are a “cost of doing business” -- in other words, a necessary expenditure that helps CII entities and other companies conduct their core operations in a safe and efficient manner. In most cases, a fixed amount of funds is budgeted for telecommunications expenditures, and telecommunications managers must operate within these constraints. While costly system upgrades do at times need to be implemented, the process of proposing and obtaining the necessary approval for such upgrades often takes many months. Depending upon the time of year and other factors, implementation itself (*i.e.*, equipment purchase, installation, and testing) could then require many more months. In light of these circumstances, the “interim” period may well have ended before the licensee could upgrade its system and thus become eligible for any interference protection. As a result, the changes would have been for naught, and, in the meantime, the harmful interference would have remained unabated, with potentially devastating consequences.

10. Moreover, even in the unlikely case that the budgetary and time constraints discussed above could be overcome, technical considerations make it infeasible for many CII and other PLMRS licensees to make the changes necessary to raise signal levels to meet the Commission's thresholds. As a basic matter, a licensee seeking to increase its signal strength would need either to add a transmitter site or to increase transmitter power at an existing site. Accordingly, for a typical *single-site*, non-simulcast, high-site trunked system (as many CII and other private systems are), the only available mechanism would be to increase transmitter power. In order, for example, to increase the field intensity from +40 dBu to +48.5 dBu so that a portable unit would become eligible for interim interference protection, the repeater station transmitter power would need to be increased by 8.5 dB; assuming a system that currently operates at 100 watts EIRP, this means that the power would need to be increased to more than 700 watts -- clearly not a practical solution given the likelihood that such a power increase would result in harmful interference to other licensees.⁴

11. Joint Petitioners strongly agree with the "CI Commenters," who stated with regard to the (then) proposed interim interference protection standards:

Protection from interference is the primary goal of the 800 MHz undertaking, and no one argues that Public Safety communications must be reliable to protect the lives and safety of personnel. *Critical infrastructure personnel and all other PLMR users also deserve reliable and safe communications.*⁵

By extending to all PLMRS licensees the additional interim interference protections that have been afforded to public safety users, the Commission would ensure that all entities receive a

⁴ If a licensee wanted to boost its field intensity at the +30 dBu contour up to the +48.5 dBu level, the power of a 100 watt system would need to be increased to *over 7000 watts*.

⁵ "Comments of the United Telecom Council, the National Rural Electric Cooperative Association and the American Water Works Association on the Public Notice," WT Docket No. 02-55 (Dec. 3, 2004), at p. 5 (emphasis added).

reasonable minimum level of protection before and during the rebanding process. Otherwise, some licensees may -- without recourse -- lose all coverage in portions of their licensed service areas, thereby undermining the Commission's laudable goals in this proceeding and potentially jeopardizing important mission-critical communications.

B. At a Minimum, CII Entities Should be Treated the Same as Public Safety Licensees During the Transition Process

12. While Joint Petitioners believe (as discussed above) that all PLMRS licensees should be afforded the same baseline level of interference protection during rebanding, it is clear that the Commission should -- at the very least -- provide CII entities with the same interim protections and procedures as public safety licensees. As the Commission recognized in its *Order* in this proceeding, “[a]n unresolved incident of unacceptable interference impairs the ability of the affected public safety *or CII licensee* to respond to an emergency, large or small.” *Order* at ¶ 136 (emphasis added). The Commission therefore concluded that both public safety and CII licensees are entitled to expect a more speedy resolution of 800 MHz interference complaints than are other types of licensees. *Id.* at ¶¶ 136-137. The Commission also determined in its *Order* that only public safety and CII licensees in the 800 MHz band will be entitled to request prior notice of new or modified 800 MHz commercial cell sites. *Id.* at ¶ 124.

13. Joint Petitioners applaud the Commission's explicit recognition in this proceeding of the importance of CII communications and their role in protecting the public. In light of this recognition, the Commission has decided to provide certain rights and protections to both public safety and CII licensees. While the Commission has provided a justification for treating CII and public licensees differently with respect to *interim* interference protection, that justification is entirely without merit (see supra at ¶¶ 8-10). Thus, if the Commission desires to preserve the

integrity of *all* safety-related communications, it should extend to CII entities the additional interim protections that have been made available to public safety licensees. There is no reason to believe that such action by the Commission would impose an “impracticable” burden on Nextel or other commercial service providers during the band reconfiguration process.

C. Licensees Should not be Expected to Make Futile Equipment Upgrades Solely in Order to Become Eligible for Interim Interference Protection

14. Joint Petitioners believe that there may be instances where the interference that a licensee is receiving is so severe that -- even if the licensee were to increase its signal levels from at or above -104/-101 dBm in a manner sufficient to meet the -88/-85 dBm interim threshold level -- it would still be suffering substantial harmful interference. Such a situation may occur, for example, when a licensee’s mobile or portable units are located in close proximity to a commercial tower site. Under these circumstances, it simply does not make sense to require the licensee to implement expensive, time-consuming, and (essentially) futile equipment upgrades simply to become eligible for any mitigation measures. (As discussed above, it is unlikely that such upgrades even could be completed before the end of the transition period). Instead, the Commission should clarify that mitigation measures are immediately available provided that the licensee can demonstrate with clear technical evidence that it would still be receiving harmful interference even if it raised its received signal level to the interim threshold.

III. CONCLUSION

15. Joint Petitioners appreciate the Commission’s efforts in this proceeding to resolve the serious interference problems that have been occurring in the 800 MHz band. As the Commission has recognized, these problems threaten not only public safety communications, but also the vital internal communications of CII entities and other businesses. To address this

situation in a fair and effective manner both during the rebanding transition period and thereafter, Joint Petitioners ask only that all licensees be provided with the same basic protections as public safety entities and that no licensee be expected to implement costly, impractical and/or futile system upgrades for the sole purpose of establishing eligibility for interim interference protection.

WHEREFORE, THE PREMISES CONSIDERED, the American Petroleum Institute and the United Telecom Council respectfully submit the foregoing Petition for Reconsideration and urge the Federal Communications Commission to act in a manner consistent with the views expressed herein.

Respectfully submitted,

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