

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

In the Matter of)	
)	
1998 Biennial Regulatory Review —)	
47 C.F.R. Part 90 – Private Land Mobile)	WT Docket No. 98-182
Radio Services)	RM-9222

**MEMORANDUM OPINION AND ORDER
 AND
 SECOND REPORT AND ORDER**

Adopted: May 2, 2002

Released: May 23, 2002

By the Commission:

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I. INTRODUCTION

1. On June 29, 2000, the Commission adopted a *Report and Order and Further Notice of Proposed Rule Making*¹ in the captioned proceeding. The Commission received six petitions for reconsideration or clarification (“Petition(s)”) of the *Report and Order*, which we address in the instant *Memorandum Opinion and Order*.² We are also adopting additional revisions to Parts 90 and 95 on our own motion. In the *Second Report and Order*, we address the comments filed in response to the proposals and issues raised in the *Further Notice*.³

II. EXECUTIVE SUMMARY

A. *Memorandum Opinion and Order*

2. The major decisions we adopt in the *Memorandum Opinion and Order* today include:

- **MURS:** We affirm the decision to license by rule (i.e., eliminate individual licensing for, and instead license by rule) five VHF frequencies that were formerly licensed under Part 90 for low-power, industrial/business use, by placing frequencies in a new Part 95 Citizens Band Radio Service named the Multi-Use Radio Service (MURS).
- **eligibility:** We decline to restrict the use of MURS to Part 90 Industrial/Business Pool eligibles. The general public is licensed by rule to use MURS for communications related to personal or business activities.
- **technical provisions:** We revise the MURS technical rules to balance the benefits of adding technical flexibility against the disadvantages of potential degradation of the existing operations of business and industrial users. As with other services licensed by rule, the rules we adopt for MURS focus on technical equipment certification requirements. We also clarify that MURS is a two-way, short-distance, voice or data

¹ 1998 Biennial Regulatory Review – 47 C.F.R. Part 90 - Private Land Mobile Radio Services, WT Docket No. 98-182, *Report and Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 16,673 (2000) (referred to herein as “*Report and Order*” or “*Further Notice*,” as applicable).

² The petitioners and other parties are listed in Appendix C.

³ These commenters are listed in Appendix D.

communication service intended for transmissions that do not typically require long duty cycles.

Under the revised rules, MURS units are:

- Permitted to have detachable antennas;
 - Permitted to have external antennas up to 6.1 meters (20 feet) above a structure or 18.3 meters (60 feet) above the ground, whichever is higher;
 - Permitted to have a total power output (TPO) of up to two (2) watts (instead of two (2) watts effective radiated power);
 - Not permitted to be used as cordless telephones, radiofacsimile (imaging), or for continuous carrier mode operations; and
 - Not permitted to be used for repeater operations.
- ATU list: We update the Airport Terminal Use (ATU) list⁴ found in Section 90.35(c)(61) of the Rules.⁵ The ATU list identifies, by name and reference coordinates, the airports at which certain 450 MHz band frequencies are reserved for stations located on or near the airports and used in connection with the servicing and supplying of aircraft.⁶

B. *Second Report and Order*

3. The major decisions we adopt in the *Second Report and Order* include:

- “Dockside” frequencies for high-power: We also address the comments and other filings in response to the *Further Notice* in this proceeding. Specifically, we adopt the proposal of the American Automobile Association (AAA) to revise the power limit on certain frequencies currently reserved for low power operations on a primary basis for cargo handling purposes at docksides. We are not, however, adopting AAA’s proposal to require all applicants to obtain AAA’s concurrence to use these frequencies.
- Public Safety Pool eligibility: We adopt our proposal to eliminate the eligibility restriction on school and park operations in the Public Safety Pool under Section 90.20 of our Rules.⁷ We also eliminate the restriction prohibiting State highway maintenance systems from operating on certain Public Safety Pool channels.

III. BACKGROUND

4. Traditionally, the private land mobile radio (PLMR) services have provided for the private, internal communications needs of public safety entities, state and local government entities, large and

⁴ The ATU list has not been significantly updated since the Commission first adopted it in 1986.

⁵ 47 C.F.R. § 90.35(c)(61).

⁶ 47 C.F.R. § 90.35(c)(61)(iv).

⁷ 47 C.F.R. §§ 90.20(a)(1)(i), 90.242(a)(1).

small businesses, transportation providers, the medical community, and other diverse users of two-way radio systems. The rules for the PLMR services are contained in Part 90 of the Commission's Rules.⁸

5. On September 30, 1998, the Commission adopted a *Notice of Proposed Rule Making* proposing a comprehensive review of the Part 90 rules applicable to the PLMR services to determine which regulations were obsolete, not in the public interest, overly complex, required editorial change, or were redundant in nature.⁹ The Commission undertook this endeavor in conjunction with its 1998 biennial review of regulations pursuant to Section 11 of the Communications Act of 1934, as amended (the Communications Act).¹⁰

6. The *Report and Order* adopted on June 29, 2000, revised the Commission's Rules to, among other things: expand the availability of thirty-one "dockside" frequencies, double the PLMR license term from five years to ten years, and increase the time period in which certain PLMR stations must be placed in operation. The *Report and Order* also clarified the frequency coordination process for Public Safety Pool channels in the 220-222 MHz band and authorized Public Safety Pool licensees to share their licensed radio facilities with Federal public safety providers. In addition, the *Report and Order* clarified the definitions of centralized and decentralized trunking and established a new process for licensing trunked systems. Finally, the Commission licensed by rule, i.e., eliminated the individual licensing requirements for, five VHF frequencies that were allocated to the Part 90 Industrial/Business Pool for low power (1- or 2-watt) operations. Under this decision, the Commission reallocated the five VHF frequencies to the Part 95 Personal Radio Services and established a new Multi-Use Radio Service (MURS) under the Citizens Band Radio Services.¹¹

7. The Commission received six petitions for reconsideration of various portions of the *Report and Order*, and we consider these petitions, along with the responsive pleadings, in the instant *Memorandum Opinion and Order*. In the *Second Report and Order* portion of this combined item, we address the comments filed in response to the proposals and issues raised in the *Further Notice*.

IV. MEMORANDUM OPINION AND ORDER

A. Multi-use radio service (MURS)

1. Scope of license by rule

8. *Background.* In the *Report and Order*, the Commission removed five Industrial/Business Pool VHF frequencies, known in the PLMR community as the VHF "color dot" frequencies, from Part 90

⁸ 47 C.F.R. Part 90.

⁹ 1998 Biennial Regulatory Review – 47 C.F.R. Part 90 - Private Land Mobile Radio Services, *Notice of Proposed Rulemaking*, WT Docket No. 98-182, 13 FCC Rcd 21,133 (1998) (*Notice*).

¹⁰ Section 11 of the Communications Act requires us to review all our regulations applicable to providers of telecommunications service and determine whether any rule is no longer in the public interest as a result of meaningful economic competition between providers of telecommunications service, and whether such a regulation should be deleted or modified. See Section 11 of the Communications Act of 1934, as amended, 47 U.S.C. § 161.

¹¹ Instead of requiring radio stations to be licensed, the Commission may by rule authorize operation in certain radio services without individual licenses. See 47 U.S.C. § 307(e)(1).

and placed them in Part 95.¹² These frequencies¹³ became a new Citizens Band Radio Service (CB) named the Multi-Use Radio Service (MURS).¹⁴ The Commission defined MURS as a two-way, short-distance, voice, data or image communication service for the personal or business activities of the general public.¹⁵

9. Motorola and RadioShack seek reconsideration of the rules and policies adopted in the *Report and Order* that established MURS.¹⁶ Both parties, as well as the Industrial Telecommunications Association, Inc. (ITA) and MRFAC, Inc. (MRFAC), disagree with the Commission's decision to include individual, general consumers within the class of users that are licensed by rule. Motorola contends that the Commission's action expanding access to consumers violates the Administrative Procedure Act (APA),¹⁷ because the *Notice* proposed only to eliminate the licensing requirement for eligible business and industrial users.¹⁸

10. Motorola, RadioShack, ITA and MRFAC claim that the record does not support including the general public within the license granted by rule in the *Report and Order*.¹⁹ While generally supportive of the Commission's proposal to license the subject frequencies by rule by reallocating them to one of the CB services, petitioners believe that the Commission should have adopted operational and eligibility rules to ensure that the frequencies are used primarily for business and industrial applications.²⁰ Specifically, these petitioners contend that the expanded use of these frequencies by the general public will result in increased congestion and interference that is incompatible with effective business communications.²¹ Moreover, taken with the licensing of the general public by rule, Motorola contends

¹² Certain low power and itinerant frequencies that are used for very low tier, low cost, entry level communications are commonly referred to as color dot frequencies because their operating frequencies are designated by a colored dot or star on the radio. This frequency identification code was developed and apparently is uniformly used by the manufacturers of these radios. *See, e.g., Notice*, 13 FCC Rcd at 21,143 ¶ 31 n.55.

¹³ The frequencies are 154.570 MHz, 154.600 MHz, 151.820 MHz, 151.880 MHz, and 151.940 MHz. There are also "color dot/star" frequencies in the 450-470 MHz PLMR band. The Commission, however, declined suggestions by Motorola and Tandy to license these UHF "color dot/star" frequencies by rule. *Report and Order*, 15 FCC Rcd at 16,688-89 ¶ 32.

¹⁴ 47 C.F.R. Part 95, Subpart J.

¹⁵ *Id.* at § 95.401(f).

¹⁶ RadioShack filed a pleading styled as a Petition for Reconsideration after the deadline for such petitions. Accordingly, we refer to RadioShack's filing as a Petition for Reconsideration merely for ease of identification and include it in the record as comments to petitions for reconsideration, because RadioShack filed it within the time period for filing oppositions to petitions for reconsideration.

¹⁷ Motorola Reply at 3. *See generally* 47 U.S.C. §§ 553(b), (c).

¹⁸ Motorola Reply at 7.

¹⁹ Motorola Comments at 2; RadioShack Petition at 2; ITA Reply at 2-3; MRFAC Comments at 2. *But see* Motorola Supplemental Comments at 4, filed July 2, 2001 (stating that the license by rule granted in the *Report and Order* can remain unchanged if the Commission adopts revisions to the technical rules).

²⁰ Motorola Petition at 3; Motorola Reply at 2.

²¹ *See* Motorola Petition at 3-6 (permitting general public to use MURS poses a likelihood of irreparable harm to business and industrial users); Motorola Comments (to Easterday and PRSG Petitions) at 5; RadioShack Petition (continued....)

that the MURS technical rules will irreparably injure industrial/business users by facilitating the development of new consumer devices operating on these channels that will be incompatible with the push-to-talk operations that are the primary mode of communication on these channels, to date.²² In this connection, Motorola avers that the *Report and Order* does not address the shared use of the frequencies by business and personal users and thus does not provide the type of “reasoned decision making” required by the APA.²³

11. In view of these concerns, Motorola and ITA request that we “return the frequencies to the Part 90 PLMR Services,”²⁴ which would re-impose the individual licensing and industrial/business eligibility requirements, whereas RadioShack and MRFAC would have us add eligibility restrictions to Part 95 so that only Part 90 Industrial/Business Pool eligibles would be licensed by rule to use MURS.²⁵

12. *Discussion.* Previously, under Part 90, personal non-business operation on the subject frequencies was not allowed and industrial/business operation required an individual license.²⁶ In the *Report and Order*, the Commission decided to license these frequencies by rule because the manner in which manufacturers had chosen to market radios that operate on these frequencies resulted in the radios being increasingly sold to the general public by mass merchandisers and mail order and Internet companies.²⁷ The Commission noted that these marketing and sales practices, as well as an earlier Commission decision that eliminated the PLMR frequency coordination requirement for these five channels, contributed to customer confusion regarding the licensing requirement. In this connection, the Commission acknowledged the low licensing rate prevalent among users of radios on these channels, which in-turn meant that the business-only licensing restriction was not being followed.²⁸ Based on the circumstances presented, the Commission concluded that the public interest was best served by

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at 2 (stating concerns regarding “the degradation of the quality of service” to business and industrial users). *Id.* See also MRFAC Comments at 2; ITA Reply at 2 (echoing concerns raised by Motorola and RadioShack).

²² See Motorola Comments at 4; Motorola Reply at 2-5.

²³ Motorola Reply at 7 (citing *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416 (1971); *Motor Vehicle Mfrs. Ass’n. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 77 (1983); and *Committee for Effective Cellular Rules v. FCC*, 53 F.3d 1309, 1317 (D.C. Cir. 1995).

²⁴ Motorola Petition at 7. See ITA Comments at 3.

²⁵ RadioShack Petition at 2-3; MRFAC Comments at 3. MRFAC states that if the subject frequencies are to be left in Part 95, they should include eligibility restrictions limiting use to industrial/business eligibles. Otherwise, the frequencies should be placed back in Part 90. *Id.*

²⁶ See, e.g., 47 C.F.R. § 90.35 (1999).

²⁷ See *Report and Order*, 15 FCC Rcd at 16,688 ¶ 31 n.98.

²⁸ *Id.* at 16,688 ¶ 31; see also *Notice*, 13 FCC Rcd at 21,144 ¶ 32. The Commission noted that the manner in which manufacturers have chosen to market radios that operate on these frequencies partially resulted in customer confusion regarding the licensing requirement. We note that, before the five frequencies became licensed by rule, the Commission’s Part 90 licensing records reflected an average of 35 licenses on each of three 151 MHz frequencies, and an average of 13,000 licenses on each of the two 154 MHz frequencies. The 151 MHz frequencies became available in 1995, as a result of decisions in the Refarming proceeding, whereas the 154 MHz frequencies were available under Part 90 for many years. Although attributable to more than one factor, the disparate licensing totals are an indication of the low licensing rate among consumers who purchased mass marketed radios after 1995.

eliminating the individual licensing requirements for these channels, and allowing both personal and business use of these channels.²⁹

13. The Commission's decision to license MURS by rule for the personal or business activities of the general public did not violate the notice and comment requirements of Section 553(b) of the APA.³⁰ Section 553(b) generally requires notice and an opportunity to comment before promulgation of a final agency rule.³¹ In this regard, it is well established that a notice of rulemaking is sufficient if it provides a description of the subjects and issues involved.³² Further, the APA "does not require an agency to publish in advance every precise proposal which it may ultimately adopt as a rule."³³ Indeed, a final rule may be a "logical outgrowth of an agency proposal."³⁴ For a rule to constitute a logical outgrowth of an agency proposal, the rule must be sufficiently related to the notice given so that interested parties "should have anticipated that such a requirement might be imposed."³⁵

14. It is undisputed that the *Notice* specifically proposed and sought comment on whether to license the VHF color dot frequencies by rule by reallocating them "from Part 90 to a radio service that does not require individual licensing, such as the Citizens Band, Low Power Radio, or Family Radio Services."³⁶ As Motorola itself pointed out,³⁷ all three of the radio services given as examples are Part 95 (Personal Radio Services) that are licensed by rule for personal and other uses.³⁸ Furthermore, the *Notice* went on to "invite comments on the effect such a reallocation would have on existing Part 90 licensees of these frequencies."³⁹ Therefore, it is apparent that the *Notice* described the subjects and issues involved in this proceeding. Moreover, based on the record, we believe that the final rules constitute a logical

²⁹ *Report and Order*, 15 FCC Rcd at 16,688 ¶ 31 (citing Amendment of Part 90 of the Commission's Rules Concerning Private Land Mobile Radio Services, WT Docket No. 97-153, *Report and Order*, 14 FCC Rcd 3023, 3024-25 (1999)).

³⁰ 5 U.S.C. § 553(b).

³¹ *Id.*

³² *See, e.g.*, Deregulation of Part 97 of the Commission's Rules to Simplify the Licensing and Operation of Complex Systems of Stations and Modify Repeater Subbands in the Amateur Radio Service, Docket No. 21033, *Memorandum Opinion and Order*, 67 FCC 2d 1107, 1113-14 ¶ 26 (1978) (referring to *California Citizens Band Ass'n v. United States*, 375 F.2d 43, 49 (9th Cir. 1967), *cert. denied*, 389 U.S. 844 (U.S. Cal. Oct. 9, 1967) (No. 396).

³³ *Id.* (referring to *California Citizens Band Ass'n*, 375 F.2d at 48).

³⁴ *See, e.g.*, 1998 Biennial Regulatory Review -- "Annual Report of the Cable Television Systems," Form 325, Filed Pursuant to 76.403 of the Commission's Rules, CS Docket No. 98-61, 15 FCC Rcd 9707, 9710 ¶ 7 (2000) (referring to *Small Refiner Lead Phase Down Task Force v. EPA*, 705 F.2d 506, 547 (D.C. Cir. 1983) and *Shell Oil Co. v. EPA*, 950 F.2d 741, 759 (D.C. Cir. 1991)).

³⁵ *Id.*

³⁶ *Notice*, 13 FCC Rcd at 21,144 ¶ 32.

³⁷ *See* Motorola Comments to *Notice* at 9-10, filed January 19, 1999 (WT Docket No. 98-182).

³⁸ *See, e.g.*, 47 C.F.R. §§ 95.191 (FRS is available to anyone who is not a representative of a foreign government), 95.401 (CB is a communication service for the personal or business activities of the general public).

³⁹ *Notice*, 13 FCC Rcd at 21,144 ¶ 32.

outgrowth of the *Notice*'s proposal to eliminate the individual licensing requirements. In this connection, interested parties should have anticipated that reallocating the subject frequencies to a service that allows personal use (like the Citizens Band, Low Power Radio, or Family Radio Services), would make the frequencies available for personal use. Finally, the *Notice* recognized that the marketing of these radios led to the perception that the frequencies were available for general non-business use and proposed an action licensing the frequencies by rule as a Part 95 service. This would plainly make it *more* difficult for the Commission to maintain an enforceable business use distinction. Accordingly, Motorola's claim that the Commission failed to provide adequate notice is incorrect.

15. In addition, we continue to believe that our decision to license the subject frequencies by rule and allow personal operations promotes the public interest. In this connection, the comments overwhelmingly supported the proposal to license by rule and the reasoning and assumptions for this action as it was proposed in the *Notice*.⁴⁰ Also, we disagree with the petitioners' claims that the record does not support including the general public within the scope of the license granted by rule.⁴¹ To the contrary, the record developed in response to the *Notice* established that a large number of unlicensed, non-industrial/business users existed on these frequencies before the Commission lifted the eligibility restrictions that limited licensing to Industrial/Business Pool eligibles. For example, the Personal Radio Steering Group, Inc. (PRSG), Dr. Michael C. Trahos (Trahos), and other parties confirm that non-industrial/business operations on the color dot frequencies were prolific prior to the rules adopted in the *Report and Order*.⁴² Therefore, as several parties observe, authorizing operation by rule on these frequencies, pursuant to the *Report and Order*, did not necessarily drastically alter the user landscape.⁴³

16. On the other hand, we find on reconsideration that Motorola and others have presented important questions concerning potentially new types of operations that might develop as a result of the Commission's decision to create MURS, as well as how such new operations could affect existing (*i.e.*, pre-MURS) users.⁴⁴ In this connection, Motorola's status as a principal manufacturer for the products used on the relevant frequencies provides strong support for its statement that virtually all pre-MURS operations, whether licensed or unlicensed, were push-to-talk.⁴⁵ Accordingly, we agree that the technical

⁴⁰ See *Report and Order*, 15 FCC Rcd at 16,688 ¶ 31 n.98 (noting that there is customer confusion regarding licensing requirements); *Notice*, 13 FCC Rcd at 21,143-44 ¶ 31 (Commission noted: (1) its receipt of significant number of inquiries from the public concerning use of color dot radios; (2) that some advertisements imply that radios may be used by anyone for any purpose, whether commercial or recreational; and (3) informal indications by manufactures that only a small percentage of persons buying radios actually apply for a license). See also Comments of the Personal Communications Industry Association, Inc. to *Notice* at 7, filed January 19, 1999 (WT Docket No. 98-182) (stating that the Commission should make clear that it will not permit other frequencies in these bands to become a haven for manufacturers to promote unlicensed consumer radios).

⁴¹ See, e.g., Motorola Petition at 2.

⁴² See PRSG Comments at 2-3; Dr. Michael C. Trahos Comments at 4, filed January 2, 2001 (Trahos Comments).

⁴³ In this connection, we find Motorola's reply that pre-MURS unlicensed operations were conducted primarily by industrial and business eligibles to be unsubstantiated and thus entitled to little weight. See Motorola Reply at 6. Moreover, we note the high probability that many unlicensed operators did not file an application for a license precisely because they were not eligible for licensing in the Part 90 Industrial/Business Pool.

⁴⁴ See, e.g., Personal Radio Steering Group, Inc. Petition for Reconsideration at ¶ 29, filed November 13, 2000 (PRSG Petition); Motorola Petition at 6; MRFAC Comments at 2-3. See also Motorola Supplement at 3-4.

⁴⁵ Motorola reply at 6.

rules adopted in the *Report and Order*, which allow unlicensed, consumer applications, including long-duration operations that are significantly different than push-to-talk, do not adequately address or appropriately balance the sharing issues raised on reconsideration.⁴⁶

17. These concerns, however, do not justify abolishing MURS.⁴⁷ Instead, today we adopt technical restrictions that are designed to address these concerns. In this connection, we note that claims of irreparable injury relative to an increase in the utilization of the channels arising from the rules adopted in the *Report and Order* are unavailing, because Part 90 industrial/business licenses for the five channels were issued on a shared basis only and not assigned for the exclusive use of any licensee.⁴⁸ Thus, such concerns raised by petitioners are overstated. Indeed, although its Petition opposed MURS, Motorola subsequently suggests that we implement certain technical limitations on the manufacturing and marketing of MURS devices, either on a temporary or permanent basis,⁴⁹ and recommends a “transition period” to give current business users a chance to migrate to spectrum in the 450-470 MHz band that is the subject of another pending rule making proceeding.⁵⁰ We decline to consider the transition plan, *in toto*, because we do not want to prejudice, much less speculate on the outcome of a pending rule making. Nonetheless, we consider each of Motorola’s suggested technical limitations in the next section.

18. As noted above, the former industrial/business licensing limitation was not effective in limiting the use of the subject frequencies to industrial/business eligibles.⁵¹ On reconsideration, we find no basis for concluding that these circumstances would change significantly by reinstating the individual licensing eligibility rules. Thus, reinstating the rule would be contrary to the public interest. In this connection, we note that the decision to license by rule relieved Industrial/Business Pool eligibles, including small businesses, of the information collection, paperwork, and financial burdens, including

⁴⁶ *Id.* Motorola points to cordless phones, baby monitors, and an entire range of voice, data, and imaging services that are not characterized by push-to-talk messages of short-duration. *Id.* at n.14.

⁴⁷ We note that pleadings filed in response to the petitions for reconsideration confirm the Commission’s conclusion that there is substantial need for mobile, two-watt, personal-use communications capabilities. *See, e.g.*, Personal Radio Steering Group, Inc. Opposition to Petition for Reconsideration at ¶¶ 9-10, filed January 3, 2001 (PRSG Opposition); Albert Verdecia Comments at 1-2, filed January 3, 2001; SAFETENET Comments at 2, filed December 11, 2000; Trahos Comments at 4; John R. Scheuchenzuber Comments at 6, filed January 3, 2001.

⁴⁸ *See* 47 C.F.R. § 90.173(a). In addition, we note that these frequencies are considered to be for “low-tier” types of business operations, as opposed to “critical” business communications. *See* note 12, *supra*.

⁴⁹ Motorola Supplemental Comments at 3. “Motorola continues to believe that the FCC’s decision failed to adequately protect incumbent business and industrial users of the VHF ‘color dot’ frequencies that now comprise the MURS spectrum allocation. After careful consideration of the record developed in this proceeding, Motorola now recommends a transitional plan to better accommodate all potential users of this spectrum.” *Id.* at 1-2 (note omitted). “As one of the leading manufacturers of consumer-oriented Family Radio Service units, Motorola is not, of course, ‘anti-MURS’.” *Id.* at 3.

⁵⁰ *Id.* at 5. Motorola states that the necessary spectrum would be provided if the Commission were to issue an Order adopting the proposal of the Land Mobile Communications Council to, *inter alia*, create twenty-five channel pairs for low power, uncoordinated use. *See Id.* at 3; Amendment of Part 90 of the Commission’s Rules and Policies for Applications and Licensing of Low Power Operations in the Private Land Mobile Radio 450-470 MHz Band, *Notice of Proposed Rule Making*, WT Docket No. 01-146, 16 FCC Rcd 14,946, 14,957 ¶ 21 (rel. July 24, 2001).

⁵¹ *Report and Order*, 15 FCC Rcd at 16,688 ¶ 31 n.98; *Notice*, 13 FCC Rcd at 21,143-44 ¶¶ 31-32.

statutory application and regulatory fees, associated with applications and licensing.⁵² Accordingly, based on the totality of the record, we find no basis for returning these frequencies to Part 90 and reinstating individual licensing for these frequencies. For the same reasons, we decline to adopt RadioShack's suggestion to restrict eligibility for MURS to only industrial and business users.⁵³

2. General technical and operating rules

19. In the *Report and Order*, the Commission established technical and operational rules for MURS including a maximum operating power, emission types, and equipment certification procedures. Several parties request reconsideration or clarification of these MURS rules. Motorola contends that the rules adopted in the *Report and Order* do not balance the benefits of technical flexibility against the potential for new non-business MURS operations to degrade the ongoing operations of previously-licensed business and industrial users.⁵⁴ To address its concerns, Motorola recommends several "transitional" or permanent rule changes to restrict MURS.⁵⁵ In its petition, PRSG requests that the Commission add technical rules or amend several of the restrictions adopted in the *Report and Order*.⁵⁶ William C. Easterday (Easterday) requests that those operators formerly licensed under Part 90 be given "grandfathered operating privileges" so that they need not abandon or significantly modify their radios.⁵⁷ In a letter filed September 7, 2000, RadioShack requests that the Commission clarify how some of the technical restrictions should be applied to MURS.⁵⁸ To address expressed concerns that the rules adopted in the *Report and Order* do not adequately balance certain sharing issues, we are adopting technical restrictions that consider the shared use of these frequencies by previously-licensed industrial/business users and new personal MURS users that are licensed by rule.

20. In response to Motorola's petition for reconsideration, SAFETENET and the Family Security Company (Family Security) filed comments supporting the creation of MURS.⁵⁹ In particular,

⁵² Accordingly, while we agree with Motorola that the Commission viewed its proposal as generally beneficial to Industrial/Business Pool users, see note 41 *supra*, the proposal was not so defined or limited to preclude the adoption of rules that are also beneficial to the general public. Moreover, the decision to license by rule and other proposals in the *Notice* were the result of the Commission's review of PLMR rules to determine which regulations were either not in the public interest, obsolete, overly complex, required editorial change, or were redundant in nature. *Notice* 13 FCC Rcd at 21,134 ¶ 2.

⁵³ We note that adopting RadioShack's approach could run counter to Section 9 of the Communications Act, which requires the Commission to assess and collect regulatory fees on a per license basis from, among others, licensees of private radio services including the Industrial/Business Pool. See 47 U.S.C. § 159(g); see also 47 C.F.R. § 1.1152.

⁵⁴ See Motorola Petition at 5.

⁵⁵ See Motorola Supplemental Comments at 3, filed July 2, 2001 (Motorola Supplemental Comments).

⁵⁶ PRSG Petition at ¶ 30.

⁵⁷ William C. Easterday Petition for Reconsideration at 1-2, filed November 13, 2000 (Easterday Petition).

⁵⁸ Letter from Dwayne Campbell, Senior Manager Regulatory Affairs, RadioShack to Herbert Zeiler, Deputy Chief, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau, dated Sept. 7, 2000 (RadioShack Letter).

⁵⁹ See Letter from Ken Klassen to Ramona Melson, Deputy Chief, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau, dated December 11, 2000 (SAFETENET Letter); Family Security Company Comments, filed March 20, 2001 (Family Security Comments).

SAFETENET and Family Security disagree with Motorola's suggestion to restrict non-business use of the subject frequencies, stating that such a rule would impede their plan to use MURS frequencies for a low-cost electronic tracking system that could be used to locate missing or abducted children.⁶⁰ On the other hand, Family Security shares Motorola's concern regarding "totally unregulated" use of MURS,⁶¹ suggesting that the Commission restrict traffic on one or two of the MURS channels to accommodate its proposed tracking system. Alternatively, Family Security asks us to allocate one or two additional channels to MURS for "public safety" use only, *i.e.*, for electronic tracking systems used to locate abducted or missing children.⁶² In addition, SAFETENET requests that we retain certain technical flexibility for the MURS channels in the event that the Commission "re-evaluates" MURS.⁶³

21. Although Family Security and SAFETENET did not file petitions for reconsideration in this proceeding, we will discuss their specific requests for technical flexibility below. The proposals to reserve one or two MURS channels or to allocate additional channels for "public safety" use, however, are beyond the scope of the issues raised in the petitions for reconsideration in this proceeding.⁶⁴ Consequently, it would be inappropriate to consider such allocation proposals herein, rather than in the context of a petition to commence a notice and comment rule-making proceeding.

a. Maximum operating power

22. In the *Report and Order*, the Commission limited the operating power of MURS frequencies to 2 watts effective radiated power (ERP).⁶⁵ Prior to MURS, the operating power of these frequencies was measured in terms of transmitter power output (TPO).⁶⁶ In its Petition, PRSG requests that the power limit be described in terms of TPO rather than ERP, because ERP is difficult for the typical user to understand or calculate and is nearly impossible to measure directly.⁶⁷ The confusion arises, according to

⁶⁰ See SAFTENET Letter at 2; Family Security Comments at 1-2. Family Security states that its planned proposed system would consist of subscriber devices (scanner/transceivers) that would scan MURS frequencies for an open channel and transmit an identifying data signal at programmed intervals to receiving devices (base station installations). The receiving device/base station installation would transmit data on MURS frequencies to query the location of a subscriber device or to issue a command to the subscriber device. See Family Security's Notice of Oral *Ex Parte* at 2, filed June 22, 2001 (Family Security Oral *Ex Parte*).

⁶¹ Family Security Comments at 3.

⁶² See Family Security Oral *ex parte* at 1. We note that it is not clear at this juncture whether Family Security or SAFETENET would be public safety eligibles under our Rules. See generally 47 C.F.R. § 90.20(a); See also Implementation of Section 309(j) and 337 of the Communications Act of 1934, as amended, *Report and Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 22,709, 22,740-41 ¶¶ 63-64 (2000).

⁶³ SAFTENET Letter at 3.

⁶⁴ We note Family Security's observation that the UHF band would be better suited for the type of operation it proposes, see Family Security Comments at 4, whereas MURS frequencies are within the VHF band.

⁶⁵ *Report and Order*, 15 FCC Rcd at 16,709 ¶ 31 (Appendix B); 47 C.F.R. § 95.639(h).

⁶⁶ Under Part 90, 154.570 MHz and 154.600 MHz were limited to two watts TPO while 151.820 MHz, 151.880 MHz, and 151.940 MHz were limited to one watt TPO. 47 C.F.R. §§ 90.35(b)(3), (c)(11), and (c)(14) (2000). For consistency and ease of use and administration, all five MURS frequencies are now allowed to operate at 2 watts.

⁶⁷ PRSG Petition at 7. In addition, RadioShack questions whether the Commission, by specifying ERP in the *Report and Order*, intended to ban the use of external antennas and require that any antenna for a MURS device be integral to the product. RadioShack Letter at 1.

PRSG, because ERP measures the power of the transmitting device plus antenna gain minus any loss factors.⁶⁸ Antenna manufacturers, however, do not always provide accurate antenna gain information, so a consumer who adds an external antenna to a 2 watt MURS radio, a practice that has been and continues to be allowed, may not be able to calculate the ERP.⁶⁹ Several commenters support PRSG's proposal.⁷⁰ Motorola agrees that an ERP calculation would be confusing to users that choose to attach aftermarket antennas.⁷¹ Nonetheless, Motorola suggests that we keep the ERP standard and adopt a new rule to require non-detachable antennas for MURS units. Motorola states that requiring integrated antennas would minimize the use of high gain antennas and linear amplifiers or other devices that spread interfering signals.⁷² Conversely, SAFETENET states that remote antennas are necessary for its electronic tracking system.⁷³

23. We agree with PRSG and the commenters that retaining the long-standing TPO standard established for these frequencies in Part 90 is warranted. The MURS rules essentially govern an existing service with many mobile units already in service. Converting the limit to ERP would be either unenforceable, or overly burdensome, because end users would have to procure ERP calculations each time an antenna is replaced. TPO, on the other hand, is verified during the equipment certification process. Although the Commission generally favors ERP limits over TPO limits because ERP more accurately defines the actual operating power of the radio, ERP is more suitable for a coordinated/licensed service or for a service where detachable antennas are prohibited. In a coordinated/licensed service, like the broadcast service, engineering studies are performed at each transmitter site to determine the ERP. In a service where detachable antennas are prohibited, like the Family Radio Service, the manufacturer determines the ERP of the radio equipment. Because MURS is neither a coordinated/licensed service nor a service that prohibits detachable antennas, we believe that TPO is the better standard. Accordingly, we will modify Section 95.639 of our rules so as to authorize MURS operations at 2 watts transmitter power output. Regarding Motorola's suggestion that we prohibit detachable antennas on new MURS units in order to protect industrial and business users, we decline to adopt such a restriction. Allowing detachable antennas is not inconsistent with the push-to-talk type of operations of MURS. In fact, detachable antennas were allowed and prevalent for industrial and business users when the subject frequencies were governed by Part 90 of the Commission's Rules, and we are adopting other technical limits to address industrial and business concerns, *e.g.*, interconnection, repeater, and continuous carrier restrictions. In addition, banning detachable antennas would be administratively burdensome for equipment makers, users, and the Commission and would limit operational flexibility for MURS users including new industrial and business users.

⁶⁸ TPO measures the power only of the transmitting device.

⁶⁹ By comparison, ERP limits are suitable for the Family Radio Service (FRS) because detachable antennas are not permitted on FRS units. *See* 47 C.F.R. § 95.194(c). Consequently, ERP measurements are accurate in the FRS because they are set by the manufacturer of these radios.

⁷⁰ *See, e.g.*, Thomas Currie comments at 2, filed November 15, 2000 (Currie Comments); William Morgan comments at 1, filed November 26, 2000 (Morgan Comments); Scott Havens comments at 9, filed December 31, 2000 (Havens Comments); Albert Verdecia comments at 2, filed January 3, 2001 (Verdecia Comments); Thomas Gruis comments at 1, filed January 3, 2001 (Gruis Comments).

⁷¹ *See* Motorola Supplemental Comments at 5-6.

⁷² *Id.*

⁷³ SAFETENET Letter at 3.

b. Antenna height

24. In the *Report and Order*, the Commission did not specify any antenna height limits for MURS stations. PRSG states, however, that such limits are necessary in order to maintain the mobile-oriented nature of MURS by preventing the proliferation of point-to-point communications.⁷⁴ PRSG therefore requests that an antenna height restriction of 20 feet above structure or 60 feet above ground, whichever is higher, be added to the MURS rules.⁷⁵ In its reply comments, MRFAC states that the absence of technical restrictions such as antenna height limits compounds the potential for interference.⁷⁶ Of the other commenters that mention it, most support at least some sort of antenna height restrictions,⁷⁷ although one commenter states that the 2 watt limitation on TPO renders antenna height restrictions unnecessary.⁷⁸

25. We find that the imposition of antenna height restrictions for MURS is warranted. In this connection, we believe that antenna height restrictions will facilitate spectrum sharing and re-use of these frequencies. Consequently, as PRSG suggests, we are revising our rules to require that MURS radios employ antennas no greater than 20 feet above structure or 60 feet above ground, whichever is higher. Because there are only five available channels, allowing antenna heights higher than this would limit the number of users that could operate at the same time on these channels. We also note that these limits promote aviation safety and are the same limits that govern the antenna height of the CB radio service.⁷⁹

c. Repeater operations

26. Repeater operations were not prohibited under Part 90 for these five VHF frequencies, and the *Report and Order* did not specifically address whether such operations would be permitted under MURS. PRSG requests that MURS stations be prohibited from engaging in repeater-type functions⁸⁰ because they “would be incompatible with the intent of the service.”⁸¹ Most of the commenters that mention the issue support PRSG’s position.⁸² We agree that repeater use would be generally

⁷⁴ PRSG Petition at ¶ 18. PRSG notes that an antenna height limit is necessary to discourage the proliferation of point-to-point and purely recreational communications because base stations offer superior coverage that would reduce the utility of this service for mobile communications, absent an antenna height limit. *Id.* at ¶¶ 19-21.

⁷⁵ *Id.* at ¶ 21. Motorola agrees with PRSG’s proposal. *See* Motorola Supplemental Comments at 5.

⁷⁶ MRFAC Comments at 3.

⁷⁷ *See* Raymond Klatt Comments at 3, filed January 2, 2001; Michael Krumlauf Comments at 2, filed January 3, 2001 (Krumlauf Comments); Morgan Comments at 1; Currie Comments at 2; Gruis Comments at 1; Motorola Supplemental Comments at 5.

⁷⁸ *See* Havens Comments at 10.

⁷⁹ 47 C.F.R. § 95.408. *Accord* PRSG Petition at ¶ 21.

⁸⁰ Repeater stations automatically retransmit the signal of another station. *See generally* 47 C.F.R. § 90.7 (definition of mobile relay station).

⁸¹ *See* PRSG Petition at ¶ 24.

⁸² *See* Krumlauf Comments at 2; Morgan Comments at 1; Verdecia Comments at 2; Currie Comments at 2; Gruis Comments at 2; Havens Comments at 9; Motorola Supplemental Comments at 5.

incompatible with the intent of MURS, which is defined as a short-distance communications service.⁸³ While repeater operation, as well as signal boosters,⁸⁴ might provide greater capabilities for in-building and “RF Hole” penetration,⁸⁵ we do not believe that this outweighs the need to limit the footprint created by any single MURS user in order to maximize frequency reuse. Because repeaters utilize two channels at once (input and output) and extend the operating range of a single user, their use would limit the number of users able to share these frequencies at the same time. In this connection, some commenters are concerned that MURS frequencies will be congested and that repeater use will only aggravate this problem.⁸⁶ We agree. Consequently, we will prohibit repeater use on MURS frequencies, including store-and-forward packet operations as described by PRSG,⁸⁷ except for those users that were properly licensed to do so under Part 90 of our rules. Thus, former Part 90 licensees will be grandfathered for repeater operations as authorized under the terms on their last Part 90 authorization and any waiver grants.

d. Interconnection with the public switched network

27. Although interconnection with the public switched network (PSN) was generally permissible under Part 90 for these five VHF frequencies,⁸⁸ the Part 95 MURS rules are silent on this point.⁸⁹ On reconsideration, the parties are split on this issue. PRSG requests that MURS frequencies be prohibited from interconnection to the PSN for the same reasons that the Family Radio Service (FRS) is prohibited from interconnection.⁹⁰ We note that in the FRS, PSN interconnection is prohibited because the Commission believed that allowing interconnection would (1) change the basic nature of the service, (2)

⁸³ 47 C.F.R. § 95.401(f).

⁸⁴ Licensees are authorized to operate signal boosters in several land mobile and microwave services. *See* Amendment of Parts 22, 90, and 94 of the Commission’s Rules to Permit Routine Use of Signal Boosters, WT Docket No. 95-70, *Report and Order*, 11 FCC Rcd 16,621 (1996). Signal boosters retransmit weak signals only on the exact frequency(ies) of the originating base, fixed, mobile, or portable station(s) and cannot extend the system’s normal signal coverage area. *See, e.g.*, 47 C.F.R. § 90.219(a).

⁸⁵ *See* Trahos Comments at ¶¶ 12, 13. The term “RF Hole” refers to locations where radio reception is difficult to achieve due to attenuation of the radio signal by surrounding terrain. RF Holes are often found inside large buildings because the surrounding structure tends to attenuate radio signals transmitted from outside the building. As for the type of operation which Trahos describes, we believe that Part 90 frequencies, where higher power operations are authorized, are better suited to serve this need.

⁸⁶ *See* Currie Comments at 2; Havens Comments at 9.

⁸⁷ PRSG Petition at ¶ 24. PRSG describes store-and-forward packet operations as directly comparable to a mobile relay station.

⁸⁸ Under Part 90, interconnection was permitted for frequencies 154.570 MHz and 154.600 MHz. *See* 47 C.F.R. § 90.476(a). Interconnection was permitted for frequencies 151.820 MHz, 151.880 MHz and 151.940 MHz outside the twenty-five urban areas listed in Section 90.477(d)(3). Interconnection on frequencies 151.820 MHz, 151.880 MHz and 151.940 MHz was permissible inside the twenty-five urban areas listed in Section 90.477(d)(3) only if the consent of all co-channel users within 120 kilometers was obtained. *Id.* *See also* 47 C.F.R. § 90.477(d)(3).

⁸⁹ 47 C.F.R. § 95.193(e) prohibits interconnection of Family Radio Service units with the PSN and 47 C.F.R. § 95.420 permits interconnection of Citizens Band Radio Service stations. Part 95 Subpart J, which sets forth service rules for MURS, is silent as to interconnection.

⁹⁰ PRSG Petition at ¶ 28. *See also* Havens Comments at 8; MRFAC Comments at 3.

reduce the number of usable channels by half, and (3) possibly require licensing and additional regulatory burdens.⁹¹ Without such a prohibition, PRSG anticipates a proliferation of cordless telephones on MURS frequencies.⁹² Motorola and MRFAC also believe that the absence of a prohibition on telephone interconnection could invite the development of two-watt cordless telephones that would increase channel usage and cause significant interference.⁹³

28. On the other hand, Currie and Gruis state that the Commission should not ban the interconnection of MURS with the PSN.⁹⁴ In particular, Currie states that limited frequency availability and increased congestion will actually prevent the proliferation PRSG predicts.⁹⁵ Gruis supports interconnection provided that “technical abuses” do not occur.⁹⁶ In addition, while SAFETENET and Family Security initially opposed the petitions, stating that PSN interconnection is essential to their planned tracking systems,⁹⁷ they later clarified that PSN interconnection would only be used to transfer data between base/receiving sites and a manned emergency monitoring station.⁹⁸ Based on this clarification, we note that this type of operation is not “interconnection” as defined in Part 90, because wireline circuits used by licensees or other authorized persons as an integral part of an authorized, private, internal system of communication are not considered to be interconnected for purposes of Part 90.⁹⁹ Therefore, SAFETENET and Family Security’s proposed operations would not be proscribed by restrictions on traditional Part 90 interconnection to the PSN. We are adding a definition of interconnection to the MURS Rules, based on the Part 90 definition, to clarify this point.

29. In light of the limited number of available channels and the importance of spectrum sharing and re-use on MURS frequencies, we agree with PRSG and other commenters that interconnection to the PSN should be prohibited at this time. Interconnected operation (cordless telephone) is typically duplex, which means that one telephone call would occupy forty percent of MURS channels in a given area. Moreover, private radio communications that are interconnected to the PSN tend to be of longer duration than other types of communication.¹⁰⁰ In addition, MURS is licensed by rule, which makes allowing

⁹¹ Amendment of Part 95 of the Commission’s Rules to Establish a Very Short Distance Two-Way Voice Radio Service, WT Docket No. 95-102, *Report and Order*, 11 FCC Rcd 12,977 ¶ 18 (1996).

⁹² PRSG Petition at ¶ 29.

⁹³ See Motorola Petition at 6; MRFAC Comments at 2-3; Motorola Supplemental Comments at 2.

⁹⁴ See Currie Comments at 3; Gruis Comments at 2.

⁹⁵ See Currie Comments at 3.

⁹⁶ See Gruis Comments at 2.

⁹⁷ See Letter from Ken Klassen to Ramona Melson, Deputy Chief, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau at 3, dated December 11, 2000 (*ex parte* or late-filed on April 11, 2001) (SAFETENET Letter); Family Security Company Comments at 3, filed March 20, 2001 (Family Security Comments).

⁹⁸ See Letter from Ken Klassen to Secretary of the Federal Communications Commission at 1-2, dated January 8, 2002.

⁹⁹ See 47 C.F.R. § 90.7.

¹⁰⁰ See Amendment of Part 95 of the Commission’s Rules to Establish a Very Short Distance Two-Way Voice Radio Service, WT Docket No. 95-102, *Report and Order*, 11 FCC Rcd 12,977, 12,984 ¶ 18 (1996).

interconnection under operating restrictions too problematic. Thus, as described above, for the same reasons that interconnection is not allowed for FRS, we conclude that interconnection is inappropriate for MURS.¹⁰¹ Former Part 90 licensees that were authorized to be connected with the PSN, however, will continue to be allowed to do so as authorized under the terms on their last Part 90 authorization and any waiver grants.

e. Continuous carrier mode

30. Under Part 90, continuous carrier mode was permissible on four of the five VHF frequencies¹⁰² and the rules adopted in the *Report and Order* carried this provision over to the Part 95 MURS rules without discussion.¹⁰³ Family Security indicates that the duration of use of MURS frequencies could become a detriment to their proposed low-cost electronic tracking system.¹⁰⁴ Family Security suggests that all voice and data traffic on MURS frequencies be time limited and that transmission intervals be time restricted.¹⁰⁵ In his comments, Verdecia states that MURS has so few available frequencies that the continuous carrier mode would cause an unacceptable loss of service in a given area.¹⁰⁶ We agree. As discussed above, users operating on a channel for an extended period would do so at the expense of existing push-to-talk voice operations, as well as other users of these shared channels. Therefore, because MURS channels are shared, we will prohibit MURS users from operating in the continuous carrier mode and require MURS operators to monitor the transmitting frequency for communications in progress before transmitting. Former Part 90 licensees authorized to operate in the continuous carrier mode prior to the creation of MURS, however, will continue to be allowed to do so in conformance with their last Part 90 authorization and any waiver grants.

f. Permissible communications

31. The *Report and Order* specifies that MURS stations are authorized to transmit any emission specified in Section 90.207 of the Commission's Rules,¹⁰⁷ which allows various types of emissions such as voice, telemetry, non-voice paging, and radiofacsimile.¹⁰⁸ Although the Commission defined MURS as a two-way short distance voice, data or image communication service,¹⁰⁹ this definition was based upon an incorrect presumption that while governed by Part 90 of the Commission's Rules, these frequencies were intended for voice, data and imaging.¹¹⁰ The transmission of "image" signals such as

¹⁰¹ Moreover, as additional support for our decision we note that MURS involves fewer channels than FRS.

¹⁰² Continuous carrier mode was authorized for frequencies 151.820 MHz, 151.880 MHz, 151.940 MHz and 154.570 MHz. Continuous carrier mode for frequency 154.600 MHz was only authorized for stations continuously licensed before May 21, 1971. 47 C.F.R. §§ 90.35(b)(35), (47).

¹⁰³ See 47 C.F.R. 95.1307(c).

¹⁰⁴ Family Security Comments at 3.

¹⁰⁵ *Id.* at 2-3.

¹⁰⁶ See Verdecia Comments at 2.

¹⁰⁷ See *Report and Order*, 15 FCC Rcd at 16,708 ¶ 27; see also 47 C.F.R. § 95.631.

¹⁰⁸ 47 C.F.R. §90.207(b).

¹⁰⁹ *Id.* § 95.401(e).

¹¹⁰ See *Report and Order*, 15 FCC Rcd at 16,688 ¶ 31.

radiofacsimile, however, was never allowed on these frequencies. Rather, under Part 90, licensees were authorized to transmit only voice, telemetry or remote control signals on these frequencies,¹¹¹ and the Commission never intended to add additional emissions. Moreover, the transmission of lengthy data signals such as radiofacsimile would be particularly disruptive to voice operations. Consequently, on our own motion on reconsideration, we are amending the MURS rules to allow only those emissions that were previously authorized under Part 90: voice, telemetry and remote control signals. We believe that this change addresses the interference concerns raised by the industrial and business users currently performing “push-to-talk” operations on these frequencies.¹¹² In this regard, we are amending the rules to define MURS as a two-way short distance voice or data communications system.

32. PRSG states that “multi-use” is ambiguous, and it suggests that we re-name MURS as the “Mobile Use Radio Service” in order to emphasize the “primary intent of these frequencies” as mobile.¹¹³ PRSG offers this suggestion as one of several measures to discourage the proliferation of point-to-point and purely recreational communications.¹¹⁴ In establishing MURS, however, the Commission contemplated multiple types of uses for these frequencies,¹¹⁵ and the technical rules that we are adopting today do not alter this concept.¹¹⁶ Specifically, MURS is not restricted to mobile use and fixed operation is allowed. Thus, even if mobile communication is the primary mode of operation on these frequencies, we see no reason to adopt a name change that implies that the service is limited to mobile operation.

g. Bandwidth

33. In his petition, Easterday indicates that the radios used by his employer are licensed for frequencies 154.570 MHz and 154.600 MHz¹¹⁷ and operate with a bandwidth of 20 kHz.¹¹⁸ Easterday notes that in the *Report and Order* the Commission limited the bandwidth of these two channels to 12.5 kHz and therefore, his employer’s equipment no longer meets the technical operating parameters of the new MURS service.¹¹⁹ Easterday requests that the Commission grandfather the equipment.

34. When governed by Part 90, the bandwidth for 154.570 MHz and 154.600 MHz was 20 kHz.¹²⁰ Although the final rules adopted in the *Report and Order* listed the bandwidth as 12.5 kHz, this

¹¹¹ See 47 C.F.R. §§ 90.35(c)(35), (45), and (47).

¹¹² See DBH Comments; Earl and Brown Comments; ProMarketing Comments; Merchant and Merchant Comments; and Wireless Solutions Comments.

¹¹³ PRSG Petition at ¶ 25.

¹¹⁴ *Id.* ¶ 20. PRSG’s other suggestions include an antenna height limit and a prohibition of repeater operations, which we discuss and adopt above.

¹¹⁵ See *Report and Order*, 15 FCC Rcd at 16,688 ¶ 31 (MURS frequencies are intended for voice, data, and imaging); see also 47 C.F.R. § 95.401(f).

¹¹⁶ See Appendix E (Final Rules) and 47 C.F.R. § 95.401(f) (MURS frequencies are intended for voice and data).

¹¹⁷ Easterday Petition at 1.

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ 47 C.F.R. § 90.35(c)(45) (2000).

change was inadvertent. Thus, because it was not intended to alter the bandwidth limitation on these frequencies, we are revising our rules to reflect the correct bandwidth for 154.570 MHz and 154.600 MHz as 20 kHz. As a result, all equipment currently in use will satisfy the technical operating parameters of MURS, and Easterday's petition for reconsideration is dismissed as moot.

35. PRSG requests that we increase the bandwidth of frequencies 151.820 MHz, 151.940 MHz, and 151.940 MHz from 11.25 kHz to 12.5 kHz,¹²¹ because maintaining separate permissible bandwidths is confusing.¹²² As noted above, however, the bandwidth of the "154 MHz" frequencies is 20 kHz, not 12.5 kHz. Therefore, even if we were to grant PRSG's request, the MURS frequencies would still have different bandwidths, and PRSG's underlying objective would not be realized. Therefore, we do not believe that raising the bandwidth on the "151 MHz" frequencies is warranted.¹²³

h. Implementation matters (equipment certification, treatment of incumbent licensees)

36. Motorola contends that the technical rules for MURS are "unworkable" because previously-licensed operations are rendered invalid.¹²⁴ Specifically, Motorola states that Easterday's petition is correct that the bandwidth requirements under MURS are in conflict with Part 90.¹²⁵ Motorola also states that it is not clear as to whether the Refarming provisions as implemented by Section 90.203 of the Commission's Rules (regarding the transition to narrowband on PLMR channels) would apply to MURS.¹²⁶ Regarding the bandwidth issue, as noted above, Easterday's concerns are moot (and here, Motorola's), because we have clarified that the radios continue to be valid.¹²⁷ On the other hand, we agree with Motorola that some of the MURS rules could be made clearer. The cause of confusion is that many of the MURS rules reference Part 90 regulations that do not apply to MURS. Consequently, on reconsideration we are eliminating all Part 90 references in the MURS rules and instead transferring the substance of any pertinent Part 90 regulations to Part 95.¹²⁸

37. We also clarify that all MURS transmitters must be certified under Part 95 in accordance with Subpart J of Part 2 of the Commission's Rules.¹²⁹ In this connection, we note that MURS radios will not

¹²¹ PRSG Petition at ¶ 26.

¹²² *Id.*

¹²³ We note that a MURS radio which operates on all MURS frequencies may limit the operating bandwidth of the two "154 MHz" frequencies to 11.25 kHz in order to create continuity with the three "151 MHz" frequencies. In other words, the authorized 20 kHz bandwidth of the two "154 MHz" frequencies is a maximum. Therefore, these frequencies may be operated using a smaller bandwidth.

¹²⁴ See Motorola Comments at 3-4.

¹²⁵ *Id.* at 3.

¹²⁶ *Id.*

¹²⁷ See *supra* para. 34.

¹²⁸ We are also revising Section 95.632(b) of our rules to state the 154 frequencies in megahertz. These frequencies were inadvertently stated in kilohertz in Appendix A of the *Report and Order*. Also, we are revising Section 90.210 of our rules in order to delete an obscure cross reference.

¹²⁹ See 47 C.F.R. Part 2, Subpart J.

be subject to the technical requirements adopted in the Refarming proceeding (*e.g.*, minimum data rate or bandwidth requirements). In addition, in answer to questions raised by RadioShack,¹³⁰ the temperature range for frequency stability tests of MURS equipment is -30° to $+50^{\circ}$ centigrade.¹³¹ RadioShack also asks whether devices currently operating on MURS frequencies will need to be re-certified under Part 95.¹³² The answer is that all equipment currently operating exclusively on MURS frequencies will be grandfathered, and manufacturers may continue to manufacture and sell such equipment without re-certifying it under Part 95. In addition, such equipment may be operated without a license. Users that operate equipment capable of transmitting on both MURS frequencies and other Part 90 frequencies, however, will continue to be required to be licensed for the Part 90 frequencies. Furthermore, all new equipment manufactured to operate exclusively on MURS frequencies must be certified under Part 95, and no new equipment will be authorized which operates on both MURS frequencies and Part 90 frequencies.¹³³

38. Motorola also suggests that the Commission prohibit the integration of MURS frequencies and FRS frequencies into a single radio unit in order to ensure that the frequencies are used primarily for business applications and not consumer use.¹³⁴ On the other hand, Havens points out that integrated radios would be advantageous in terms of interoperability and for emergency communications, and Gruis states that there is no apparent reason to prohibit combined units.¹³⁵ We believe that any benefits resulting from interoperability are outweighed by the potential for abuse and consequently, we will not permit a single radio unit to combine both MURS frequencies and FRS frequencies. MURS and FRS are separate services with differing purposes. FRS is a narrowly tailored service intended strictly for private two-way, very short-distance voice communications for facilitating family and group activities.¹³⁶ MURS, on the other hand, is a more flexible service intended for voice or data communication.¹³⁷ We believe that the combination of MURS frequencies and FRS frequencies in a single unit could lead to operations on FRS frequencies which are incompatible with the intent of FRS.

39. In its Supplemental Comments, Motorola suggests that the Commission defer full implementation of MURS in order to protect business and industrial users from potential interference.¹³⁸ Motorola notes that any adverse impact to these users could be alleviated by providing an “alternative spectrum home” and time to move there.¹³⁹ In this connection, technical restrictions would be imposed

¹³⁰ See RadioShack letter at 1.

¹³¹ See 47 C.F.R. § 2.1055.

¹³² RadioShack letter at 1.

¹³³ See, *e.g.*, Appendix E §§ 95.603(g), 95.655(d).

¹³⁴ See Motorola Petition at 6.

¹³⁵ See Havens Comments at 12; Gruis Comments at 3.

¹³⁶ 47 C.F.R. § 95.401(b).

¹³⁷ 47 C.F.R. § 95.401(f).

¹³⁸ Motorola Supplemental Comments at 3.

¹³⁹ *Id.* Motorola suggests that the twenty-five channel pairs in the 450 MHz band being considered by the Commission for non-coordinated, itinerant use, as part of a petition for rule making filed by the Land Mobile Communications Council (WT Docket No 01-146), would provide the necessary spectrum alternative for industrial and business incumbents that have been displaced by MURS. See Amendment of Part 90 of the Commission’s (continued....)

during a “transition period” so as to protect business and industrial users that require “more critical low power uses” until they could move to the new spectrum.¹⁴⁰ Motorola suggests that during this transition period the Commission prohibit data transmissions, interconnection to the PSN, repeater operations, and detachable antennas.¹⁴¹ We have already addressed three of the four Motorola transition suggestions. Specifically, on a permanent basis, we have prohibited interconnection with the PSN,¹⁴² prohibited repeater use,¹⁴³ and declined to prohibit detachable antennas.¹⁴⁴ Moreover, we do not believe that the public interest would be served by delaying the implementation of MURS by establishing a migration period. As noted above, Motorola’s migration plan is too speculative as it relies on the availability of spectrum that is the subject of a Notice of Proposed Rule Making.¹⁴⁵ Accordingly, we decline to prohibit data operations during a transition period.

40. In addition, we clarify that all previously licensed operations on the subject frequencies, including any waivers, are grandfathered. While we have added technical restrictions to MURS that will limit congestion and interference and encourage operations of the type that these frequencies were originally intended (and for which still may be used), these additional technical restrictions will not apply to former licensees on these frequencies. Therefore, entities that held licenses as of November 12, 2000, for the former Part 90 frequencies that were redesignated to MURS effective November 13, 2000, are granted a license by rule that authorizes continued operations under the terms of such nullified Part 90 authorizations, including any rule waivers.

B. Public safety and industrial/business radio station sharing under Section 90.179

41. In the *Report and Order*, the Commission revised Section 90.179 to allow Public Safety Pool licensees to share the use of their radio facilities with Federal government entities.¹⁴⁶ The Commission, however, declined to allow public safety licensees to share their spectrum with industrial/business entities in order to ensure that public safety communications requirements are not compromised.¹⁴⁷ The American Association of State Highway and Transportation Officials (AASHTO) filed a petition in which it asks the Commission to reconsider this decision and allow public safety agencies to enter into sharing

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Rules and Policies for Applications and Licensing of Low power Operations in the Private Land Mobile Radio 450-470 MHz Band, WT Docket No. 01-146, *Notice of Proposed Rule Making*, FCC 01-199 (rel. July 21, 2001).

¹⁴⁰ Motorola Supplemental Comments at 3-4.

¹⁴¹ *Id.* at 5.

¹⁴² *See supra*, para. 29.

¹⁴³ *See supra*, para. 26.

¹⁴⁴ *See supra*, para. 23.

¹⁴⁵ *See supra*, note 50 and accompanying text.

¹⁴⁶ *Report and Order* 15 FCC Rcd at 16,681-82 ¶ 19; 47 C.F.R. 90.179(g).

¹⁴⁷ *Report and Order*, 15 FCC Rcd at 16,681-83 ¶¶19-20.

agreements with utility companies.¹⁴⁸ AASHTO states that such sharing agreements will result in interoperability gains and improved emergency response operations.¹⁴⁹

42. *Discussion.* Nothing in the record persuades us that the Commission's decision declining to permit public safety licensees from sharing their spectrum with industrial/business entities should be changed. While there may be certain benefits to allowing public safety licensees to share spectrum with utilities, they are outweighed by the need to assure that adequate spectrum is available to meet the present and future need of the public safety community. In unique circumstances, public safety licensees may share their spectrum with industrial/business entities pursuant to individual rule waivers.¹⁵⁰

C. Frequency coordination for 220 MHz public safety frequencies

43. *Background.* In the *Report and Order*, the Commission adopted its proposal to require frequency coordination for applications seeking any of fifteen frequency pairs in the 220-222 MHz band designated for public safety or emergency medical use.¹⁵¹ In its petition, AASHTO requests that the Commission clarify that applicants for the 220 MHz public safety frequencies are able to submit their applications to *any* of the certified public safety frequency coordinators.¹⁵²

44. *Discussion.* The Commission stated in the *Report and Order* that applicants for 220-222 MHz band public safety frequency pairs would submit their applications to "a certified public safety frequency coordinator."¹⁵³ Section 90.175 of the Rules sets forth frequency coordination requirements for Part 90 applications and paragraph (i) of Section 90.175 lists the types of applications that are exempt from the coordination requirement.¹⁵⁴ In the *Report and Order*, the Commission implemented its decision to require coordination for 220 MHz applications by deleting paragraph (i)(14) of Section 90.175, which

¹⁴⁸ American Association of State Highway and Transportation Officials Petition for Reconsideration, filed November 13, 2000 (AASHTO Petition).

¹⁴⁹ *Id.* at 2.

¹⁵⁰ *Report and Order*, 15 FCC Rcd at 16,682-83 ¶ 20. *See also* American Electric Power Service Corporation, *Order*, 15 FCC Rcd 15,553 (2000), Central and South West Services, Inc., *Order*, 13 FCC Rcd 16,162 (1998), and Texas Utilities Services, Inc., *Order*, 13 FCC Rcd 4258 (1997).

¹⁵¹ *Report and Order*, 15 FCC Rcd at 16,680 ¶ 14. As a general matter, shared frequencies that are licensed under Part 90 are subject to a frequency coordination requirement, although the five shared 220 MHz public safety frequency pairs have been an exception. Without coordination, users eligible to use shared channels might not choose the most appropriate frequency, which could needlessly lead to interference and avoidable frequency congestion problems. *Report and Order*, 15 FCC Rcd at 16,680 ¶ 15, *citing* Frequency Coordination in the Private Land Mobile Radio Services, *Report and Order*, 103 FCC 2d at 1098.

¹⁵² AASHTO Petition at 2 (emphasis added). By way of explanation, although the *Report and Order* notes that applicants would submit their applications to "a certified public safety frequency coordinator," *Report and Order*, 15 FCC Rcd at 16,679-80 ¶ 13, only three coordinators appear to be certified under the current Rules. *See* 47 C.F.R. § 90.20(c)(3).

¹⁵³ *Report and Order*, 15 FCC Rcd at 16,679-80 ¶ 13.

¹⁵⁴ 47 C.F.R. § 90.175(i).

formerly exempted applications for frequencies in the 220-222 MHz band from the coordination requirement.¹⁵⁵

45. We agree to make the clarification suggested by AASHTO to the extent discussed below. To do so, it is first necessary to note the 1997 *Refarming Second Report and Order*, wherein the Commission consolidated the twenty PLMR services into two frequency pools—Public Safety and Industrial/Business.¹⁵⁶ The Public Safety Pool consists of all the frequencies that were in any of the Public Safety Radio Services and the Special Emergency Radio Service.¹⁵⁷ Section 90.20(c)(3) of the Rules lists each frequency within the Public Safety Pool along with the public safety coordinator(s) certified to coordinate applications for a given frequency.¹⁵⁸ As adopted and released by the Commission, Section 90.20(c)(3) certified the Emergency Medical Radio Service coordinator to coordinate applications for the five frequency pairs in the 220-222 MHz band that are designated for emergency medical use.¹⁵⁹ The final adopted and released rule also listed the band 220-222 MHz without specifying any coordinator. Under our rules, frequencies without any coordinator specified may be coordinated by any coordinator certified in the Public Safety Pool.¹⁶⁰ In this connection, we note that the final adopted and released rule did not separately list the ten public safety frequencies in the 220-222 MHz band.

46. The final rules for the *Refarming Second Report and Order* that were published in the Federal Register included the provisions just described. However, due to an administrative error, the published rule also lists each of the ten public safety frequencies along with the designators for the Police and the Special Emergency coordinators.¹⁶¹ This error remains uncorrected in the current version of Section 90.20(c)(3), presumably because it remained undetected, if not irrelevant, until the Commission's decision in the *Report and Order* to require frequency coordination for 220-222 MHz public safety frequencies, which are available to any eligible public safety entity.¹⁶² In view of these circumstances, we

¹⁵⁵ *Id.* § 90.175(i)(14) (1999).

¹⁵⁶ *Refarming Second Report and Order*, 12 FCC Rcd at 14317-8 ¶ 20.

¹⁵⁷ These services consist of the Local Government Radio Service, Police Radio Service, Fire Radio Service, Highway Maintenance Radio Service, Forestry-Conservation Radio Service, Emergency Medical Radio Service, and the Special Emergency Radio Service.

¹⁵⁸ 47 C.F.R. § 90.20(c)(3).

¹⁵⁹ *See Refarming Second Report and Order*, 12 FCC Rcd 14,307 at Appendix E. The Commission created the Emergency Medical Radio Service in 1993 by designating frequencies for EMRS including five 220-222 MHz frequency pairs, *i.e.* channels 181-185. *See* Amendment of Part 90 of the Commission's Rules to Create the Emergency Medical Radio Service, PR Docket No. 91-72, *Report and Order*, 8 FCC Rcd 1,454 at 1,459 ¶ 28 (1993). The Commission certified the International Municipal Signal Association and the International Association of Fire Chiefs, Inc. (IMSA/IAFC) as the exclusive coordinator for EMRS. *See* 8 FCC Rcd at 1,460 ¶ 33. *See also id.* at n.89 (noting that the five 220 MHz EMRS frequency pairs are not subject to coordination).

¹⁶⁰ *See* 47 C.F.R. § 90.20(c)(2). In this connection, the Commission has stated that where frequencies are available to all public safety entities, any of the certified public safety coordinators may provide coordination. *See Refarming Second Report and Order*, 12 FCC Rcd at 14,327 ¶¶ 37-8. The Commission found that the coordination mechanism was already in place to accommodate multiple coordinators where public safety frequencies are shared between public safety entities. *Id.*

¹⁶¹ 62 FR 18834, 18847 (Apr. 17, 1997). *See* 47 C.F.R. § 90.20(c)(3) (listing coordinator codes PM, PP, and PS for the fifteen 220 MHz frequency pairs set aside for Public Safety and EMRS).

¹⁶² 47 C.F.R. § 90.720 (eligibility criteria). *See* 12 FCC Rcd at 10973-5 ¶¶ 61-3 (1997); *220 MHz Notice*, 13 FCC (continued....)

grant AASHTO's request as to the ten Public Safety frequency pairs by revising Section 90.20(c)(3) to correct the publication error so that, as to the 220-222 MHz band, the rule will read as adopted and released in the *Refarming Second Report and Order*. We decline AASHTO's request with respect to the five EMRS frequency pairs because, as to these frequencies, the current rule accurately reflects the rule that the Commission adopted in 1997. Similarly, on our own motion, we are adopting corrections to Sections 90.35 and 90.175 of the Commission's Rules to more accurately reflect the Commission's decisions in the *Refarming Fifth MO&O*.¹⁶³

47. In summary, all public safety coordinators including the Special Emergency Coordinator are certified to coordinate applications for the ten Public Safety frequency pairs in the 220-222 MHz band. The Emergency Medical Coordinator is the only coordinator certified to coordinate applications for the five Emergency Medical frequency pairs in the 220-222 MHz band. AASHTO's request for clarification as to the 220-222 MHz Emergency Medical frequency pairs raises competitive coordination issues that appear to be within the scope of a separately pending petition for rulemaking to introduce competitive coordination into the Public Safety Pool below 470 MHz.¹⁶⁴

D. Update of airport terminal use list

48. *Background.* Currently, 40 channel pairs in the Business Radio Service are reserved on or near certain airports for commercial air transportation services.¹⁶⁵ These airports are specifically identified in the Commission's Rules on what is known as the airport terminal use (ATU) list.¹⁶⁶ In the *Notice* in this proceeding, noting that it had been some time since the ATU list was last reviewed,¹⁶⁷ the Commission requested comment as to whether the list should be updated.¹⁶⁸ PCIA filed comments¹⁶⁹ that incorporated by reference a 1998 petition for rule making filed by PCIA, ITA, and Aeronautical Radio, Inc. (ARINC) (collectively, Petitioners), that proposed revisions to the ATU list.¹⁷⁰ Petitioners state that

(Continued from previous page) _____
Rcd 2758.

¹⁶³ Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, PR Docket No. 92-235, *Fifth Memorandum Opinion and Order*, 16 FCC Rcd 416 (2001). Specifically, we are adding the Telephone Maintenance Radio Service to the former radio services listed in 47 C.F.R. §§ 90.35(b)(2)(iii) and 90.175(b)(1), and clarifying that these provisions apply above 150 MHz.

¹⁶⁴ See *Public Notice*, Request Amendment of the Commission's Rules to Permit Use of Any Certified Public Safety Coordinator for Channels Below 470 MHz, Report No. 2469, RM-10077 (rel. Mar. 1, 2001) (APCO Petition).

¹⁶⁵ There are 40 frequencies from 460.650 MHz to 460.89375 MHz and 40 frequencies from 465.650 MHz to 465.89375 MHz reserved for such operations. See 47 C.F.R. § 90.35(c)(61).

¹⁶⁶ 47 C.F.R. § 90.35(c)(61)(iv).

¹⁶⁷ The ATU list was adopted in 1986. Amendment of Part 90 of the Commission's Rules to Relax Restrictions on Certain Frequencies in the Business Radio Service, PR Docket No. 85-273, *Report and Order*, 60 Rad. Reg. 2d (P & F) 379 (1986) (*ATU Report and Order*).

¹⁶⁸ *Notice*, 13 FCC Rcd at 21,136 ¶ 8 and n.19.

¹⁶⁹ PCIA Comments at 9.

¹⁷⁰ *Id.*, citing Petition for Rulemaking, Request Amendment of the Commission's Rules Regarding Airport Terminal Use Frequencies in 450 MHz Band, *Public Notice*, RM No. 9319 (rel. July 16, 1998) (ATU Petition)). PCIA, (continued....)

the existing list, which is designed to protect airport terminal operations from harmful interference, needs to be updated. Furthermore, Petitioners contend that updating the list will promote the deployment of advanced technologies at airports and have a minimal impact on non-airport users.¹⁷¹ Although the Commission requested comment on the ATU list issue in the *Notice*, the Commission did not address this matter in the *Report and Order*.¹⁷² PCIA filed a petition for reconsideration asking that the Commission reconsider this omission and update the ATU list.¹⁷³ Comments in support of the PCIA Petition were filed by the Industrial Telecommunications Association (ITA) and we received no opposition filings.¹⁷⁴

49. We agree with Petitioners that updating the ATU list is appropriate. More than fifteen years have passed since the Commission first adopted the ATU list, and due to changing population and travel patterns, airports not previously contemplated by the rule merit inclusion on the list.¹⁷⁵ Accordingly, we are revising Section 90.35(c)(61)(iv) of our rules to include the list of airports specified by Petitioners in their reconsideration petition.¹⁷⁶ We clarify that the addition of these airports to the ATU list is on a prospective basis only, so existing non-airport terminal business radio facilities located near these “new” airports will be grandfathered and may continue to operate in accordance with their current authorizations. Such licensees may assign their existing licenses without losing grandfathered status, although modifications to existing facilities, such as their relocation closer to a protected airport or an increase in power, must comply with the non-interference conditions specified in our rules.¹⁷⁷ Pending applications will be subject to the rule changes adopted in this *Memorandum Opinion and Order*. Finally, we correct certain coordinates listed on the ATU list.¹⁷⁸ In this connection, we delegate authority to the Wireless Telecommunications Bureau to revise Section 90.35(c)(61) of our Rules from time-to-time as the Bureau finds appropriate to conform our Rules to FAA corrections/updates to airport data *e.g.*, names, codes, or coordinates. This delegation to the Bureau includes authority to address any

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ARINC, and ITA note that “virtually all major airlines are members/owners of ARINC, and numerous airlines (or airport support services) are members of PCIA and/or ITA. *Id.* at 2, n.4. For reference purposes, we shall refer to PCIA, ARINC, and ITA as “Petitioners.”

¹⁷¹ ATU Petition at 5.

¹⁷² *Report and Order*, 15 FCC Rcd 16,673.

¹⁷³ PCIA Petition for Reconsideration at 3 (filed Nov. 13, 2000) (PCIA Petition).

¹⁷⁴ Letter from Mark E. Crosby, President/CEO, ITA to Magalie Roman Salas, Secretary, FCC, dated Dec. 4, 2000.

¹⁷⁵ *See id.* at 4, Exhibit A (proposing 82 additional airports).

¹⁷⁶ *See* PCIA Petition at Exhibit A (incorporating ATU Petition at Exhibit A). We decline, however, to add Robert Mueller Municipal Airport as suggested by Petitioners since that airport no longer exists according to the Federal Aviation Administration’s May 17, 2001 directory of Public Use Landing Facilities. *See* <http://www.faa.gov/arp/330home.htm>.

¹⁷⁷ 47 C.F.R. §§ 90.35(c)(61)(i-iii). *See ATU Report and Order*, 60 Rad. Reg. 2d (P&F) 379, 381 ¶ 8.

¹⁷⁸ We correct the coordinates for the Greater Cincinnati International Airport (CVG), in Covington, KY, Cincinnati-Blue Ash Airport (ISZ), and the Denver-Jeffco Airport (BJC) in Denver, CO, as suggested by Petitioners. *See* ATU Petition at 5-6, PCIA Petition at 4, n.8. On our own motion, we conform the airport names, codes, and coordinates listed in current Section 90.35(c)(61)(iv), 47 C.F.R. § 90.35(c)(61)(iv), and in the Petitioners proposed list of airports, with the airport data listed in the FAA’s February 21, 2002 directory of Public Use Landing Facilities. *See* <http://www.faa.gov/arp/330home.htm>. Therefore, the ATU list adopted in Appendix E revises the current ATU list and combines the revised list with Petitioners proposed list, as described herein.

implementation matters that may arise from such rule revisions.

V. SECOND REPORT AND ORDER

A. Public Safety Pool: schools and parks eligibility

50. *Background.* The Commission's Rules currently exclude school districts and authorities and park districts and authorities from holding licenses in the Public Safety Pool to operate radio stations for the transmission of communications essential to their official activities.¹⁷⁹ In the *Further Notice*, the Commission proposed to eliminate this restriction, stating that it believed that sufficient frequencies had become available in the Public Safety Pool to accommodate schools and parks.¹⁸⁰ In addition, noting that school districts and authorities may obtain licenses in the Industrial/Business Pool and that adoption of this proposal would allow them to be licensed in the Public Safety Pool, the Commission proposed to eliminate school district and authorities eligibility from the Industrial/Business Pool.¹⁸¹

51. *Discussion.* We agree with the majority of commenters that adoption of our proposal to eliminate eligibility restrictions on schools and parks in the Public Safety Pool is warranted.¹⁸² Although APCO recommends that the Commission maintain these restrictions until additional spectrum is made available,¹⁸³ we believe that such concerns are outweighed by the public interest benefits obtained by simplifying eligibility requirements and facilitating interoperable communications between school or park personnel and other public safety entities, especially during disasters and emergencies.¹⁸⁴ In addition, our decision here will help streamline the licensing process, as park districts and authorities will no longer be required to file a request for waiver in order to obtain a license for essential communications needs.¹⁸⁵ Despite our conclusion that sufficient frequencies have become available in the Public Safety Pool to accommodate schools and parks, we acknowledge APCO's concerns regarding spectrum scarcity in the Public Safety Pool.¹⁸⁶ Still, in light of the important public interest benefits mentioned above, we will

¹⁷⁹ 47 C.F.R. § 90.20(a)(1)(i).

¹⁸⁰ *Further Notice*, 15 FCC Rcd at 16,693 ¶ 44.

¹⁸¹ 47 C.F.R. § 90.35(a)(2). *Further Notice*, 15 FCC Rcd at 16,693-4 ¶ 45.

¹⁸² *See, e.g.*, PCIA Comments at 2; MRFAC Comments at 2. *See also* SBT Comments at 2 (filed Nov. 14, 2000).

¹⁸³ APCO Comments at 4, filed Nov. 14, 2000 (APCO notes that ongoing TV broadcast operations make the 24 MHz spectrum unavailable, consolidation of the PLMR services into two pools did not add new spectrum, and technical advances have not kept pace with increasing demand for Public Safety Pool channels); Mayworm Comments at 2.

¹⁸⁴ *Further Notice*, 15 FCC Rcd at 16,693-4 ¶¶ 44-5.

¹⁸⁵ *Id.* Currently, absent a waiver, parks are ineligible to operate radio stations in the Public Safety or Industrial/Business Pools. 47 C.F.R. §§ 90.20(a)(2)(ii), 90.35(a)(2). *Further Notice*, 15 FCC Rcd at 16,693-4 ¶¶ 45-6.

¹⁸⁶ APCO Comments at 2. Even APCO, however, "has generally supported the basic principal that all state and local government entities be treated as public safety, which avoids the extremely difficult task of distinguishing between users based on their function rather than their identity." *Id.*

amend Section 90.20 of the Commission's Rules accordingly¹⁸⁷ and make conforming changes to Section 90.242.¹⁸⁸

52. Regarding the removal of school eligibility from the Industrial/Business Pool, the majority of commenters do not believe that existing Industrial/Business Pool school operations should be required to relocate to the Public Safety Pool.¹⁸⁹ In this connection, we want to ensure that our decision does not result in any unintended adverse public safety consequences. As pointed out by College Station Independent School District, the costs of being forced to relocate from the Industrial/Business Pool to the Public Safety Pool could be substantial.¹⁹⁰ While grandfathering existing school operations in the Industrial/Business Pool would appear to alleviate this concern, prohibiting new applicants from holding authorizations in the Industrial/Business Pool could have an unintended adverse impact on school eligibility for frequencies above 800 MHz.¹⁹¹ Because the record is not developed as to the impact such a change could have to existing school operations in the 800 and 900 MHz bands, particularly as to school operations in the 900 MHz band where there is no Public Safety category, we will not delete school district and authority eligibility from the Industrial/Business Pool.¹⁹² Finally, pending applications, including waiver requests filed by Park districts and authorities, will be subject to the rule changes adopted in this *Second Report and Order*.¹⁹³

¹⁸⁷ With this change, schools and parks are also eligible to be licensed for frequencies above 800 MHz governed by Section 90.617 (Subpart S) and for the ten 220 MHz channels available to public safety entities under Section 90.720(a) (Subpart T) of the Commission's Rules. This rule change does not impact licensing under Sections 90.103 (Subpart F), 90.311 (Subpart L), or 90.523 (Subpart R), as these Subparts all contain separate eligibility requirements.

¹⁸⁸ Section 90.242(a)(1) of the Commission's Rules specifically extends eligibility for Travelers' information stations to park districts and authorities. Eliminating the Public Safety Pool restrictions on parks, however, causes Section 90.242(a)(1) to become unnecessary.

¹⁸⁹ See e.g., PCIA Comments at 2 (supporting dual eligibility); MRFAC Comments at 2, n.1 (suggesting forced relocation would unduly disrupt existing school operations). APCO is opposed to the entire proposal. APCO Comments at 2-4 (warning of a mass migration of school districts and authorities from the Industrial/Business Pool to the Public Safety Pool). But see SBT Comments at 2-3 (indicating forced relocation would free up much needed spectrum for I/B users).

¹⁹⁰ See College Station Independent School District Comments at 1, filed Sept. 29, 2000 (estimating it would cost the district more than \$73,000 to purchase and install new equipment). See also Kay Independent School District Comments at 1, filed Sept. 20, 2000 (asking whether the Commission will grandfather existing school operations or whether the Commission will fund the conversion). See also MRFAC Comments at 2, n.1.

¹⁹¹ See 47 C.F.R. § 90.617(c) which includes as eligible for Business Radio Category channels those entities eligible in the Industrial/Business Pool.

¹⁹² Our decision here makes it less likely that APCO's fears of a "mass migration" of schools from the Industrial/Business Pool to the Public Safety Pool will be realized.

¹⁹³ See *Further Notice*, 15 FCC Rcd at 16,693-4 ¶¶ 45-6.

B. State highway maintenance eligibility

53. *Background.* Section 90.20(d)(43) of the Commission's Rules reserves certain Public Safety Pool frequencies for use in highway maintenance systems operated by licensees other than States.¹⁹⁴ In the *Further Notice*, the Commission granted AASHTO's request to clarify that all public safety users, other than state highway systems, are permitted to use these frequencies.¹⁹⁵ Additionally, the Commission proposed to eliminate the current restriction in its entirety in order to make State highway maintenance systems eligible to use these frequencies on the same basis as all other public safety users.¹⁹⁶

54. *Discussion.* AASHTO supports the proposal and no commenters oppose it. As stated in the *Further Notice*, we believe that eliminating the state highway restriction will further our goal of making more efficient use of spectrum by facilitating increased sharing.¹⁹⁷ Consequently, we are removing the note 43 restriction from Section 90.20(d) of the Commission's Rules.

C. Dockside channels

55. *Background.* In the *Report and Order*, the Commission clarified that the thirty-one Dockside channels are available to Industrial/Business Pool eligibles for use on a secondary basis to cargo handling operations at docksides.¹⁹⁸ Currently, the Dockside channels are restricted to a maximum power of 2 watts.¹⁹⁹ In supplemental comments submitted in response to the *Notice* in this proceeding, AAA requests that the Commission eliminate the power restriction on eight of these Dockside frequencies.²⁰⁰ We note that one of the eight channels in AAA's original proposal (457.5375 MHz) is designated for low power use under Section 90.267 of the Commission's Rules,²⁰¹ and that AAA's proposal no longer includes this channel.²⁰² AAA also proposes that the Commission designate AAA as the sole coordinator of those frequencies.²⁰³ The *Further Notice* sought comment on these proposals.

¹⁹⁴ 47 C.F.R. § 90.20(d)(43). There are twenty-nine frequencies between 156.165 MHz and 159.1725 MHz with the note 43 limitation. *Id.* § 90.20(c).

¹⁹⁵ *Further Notice*, 15 FCC Rcd at 16,694 ¶ 48.

¹⁹⁶ *Id.* at 16,694-95 ¶ 48.

¹⁹⁷ *See, e.g., Refarming Second Report and Order*, 12 FCC Rcd 14, 307, 14,317 ¶ 18.

¹⁹⁸ *Report and Order*, 15 FCC Rcd at 16,677 ¶ 8.

¹⁹⁹ *See* 47 C.F.R. § 90.35(c)(60).

²⁰⁰ American Automobile Association Supplemental Comments to *Notice* at 2, filed August 26, 1999 (WT Docket No. 98-182) (AAA Supplemental Comments). *See* Wireless Telecommunications Bureau Accepts LMCC low Power Plan for Part 90 450-470 MHz Band, *Public Notice*, DA 00-1359 (rel. June 29, 2000).

²⁰¹ 47 C.F.R. § 90.267.

²⁰² Letter from Michele C. Farquhar, Counsel for American Automobile Association to Magalie Roman Salas, Secretary, FCC, dated May 7, 2001. The remaining seven frequencies are: 457.525 MHz, 457.550 MHz, 457.5625 MHz, 457.575 MHz, 457.5875 MHz, 457.600 MHz, and 457.6125 MHz.

²⁰³ AAA Supplemental Comments at 5.

56. *Discussion.* AAA states that eliminating the power restriction will alleviate private radio spectrum shortage by opening these seven channels to auto clubs and other Industrial/Business Pool eligibles for high-power paired repeater operations.²⁰⁴ We agree. The potential to pair these frequencies with seven of the Auto Emergency Road Service (AERS) or other Industrial/Business Pool frequencies, where one channel can be used as a high-powered mobile relay (or repeater) station, would enable licensees to overcome terrain obstacles and significantly increase coverage of signals for existing licensees on the AERS channels, as well as for all potential users in the Industrial/Business Pool. In this connection, we find that PCIA's concern of potential interference to existing low power stations is outweighed by the benefits to the public of more efficient and reliable communications that eliminating the power restrictions on these seven channels will provide.²⁰⁵ Moreover, frequency coordinators must take into account existing low power operations when conducting a frequency coordination analysis on the subject channels, and specifically, must continue to protect dockside operations, which remain primary.

57. On the other hand, regarding AAA's request that it be made the sole frequency coordinator for these frequencies or that applicants for AERS channels be required to obtain AAA's "express written consent or concurrence," we do not agree that this limitation is necessary in order to protect incumbents on the Dockside channels or to prevent interference on the corresponding AERS channels.²⁰⁶ Instead, we agree with the MRFAC, PCIA, and ITA that a coordination monopoly is unnecessary to protect licensees from harmful interference and that competition amongst the frequency coordinators is generally preferable, as it will result in better service to the public.²⁰⁷ Moreover, the fact that AAA will remain as the sole frequency coordinator for the AERS channels mitigates AAA's concerns of interference, as any applications seeking authorization to pair an AERS channel with one of the dockside channels will have to be first cleared by AAA.²⁰⁸ Similarly, any modification applications that involve an AERS frequency will be subject to AAA's approval.

VI. CONCLUSION

58. With the adoption of this *Memorandum Opinion and Order on Reconsideration and Second Report and Order*, we resolve several petitions for reconsideration filed in this proceeding. Specifically, while adopting certain technical rules in order to prevent abuse and degradation of service in MURS, we have declined to impose eligibility restrictions that would limit personal uses of these frequencies. In addition, we have reiterated our commitment to ensuring that public safety spectrum needs are

²⁰⁴ American Automobile Association Reply Comments at 3, filed December 14, 2000.

²⁰⁵ PCIA Comments at 3. We note in addition that since the filing of its comments PCIA has expressed its "willingness to accept high power operation" on the subject frequencies. MRFAC, PCIA, and ITA Supplement to *Ex Parte* Notification at 2, filed April 9, 2001 (*Ex Parte* Supplement).

²⁰⁶ See AAA *Ex Parte* Notification at 2, filed May 7, 2001.

²⁰⁷ See MRFAC Comments at 3; *Ex Parte* Supplement at 1; MRFAC, PCIA, and ITA *Ex Parte* Notification at 1-2, filed July 25, 2001. See also Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Services, PR Docket No. 92-235, *Second Report and Order*, 12 FCC Rcd 14,307, 14,328 ¶ 40 (1997).

²⁰⁸ 47 C.F.R. §§ 90.35(b)(2) and (3). See also Letter from Michele Farquhar, counsel to American Automobile Association to Magalie Roman Salas, Secretary, FCC, dated August 17, 2001 (seeking FCC designation as frequency coordinator only for those situations where AERS and high power dockside frequencies are paired).

uncompromised and updated the airport terminal use list. Also, in the *Second Report and Order*, we have eliminated unnecessary eligibility restrictions in the Public Safety Pool and lifted the power restrictions on seven of the thirty-one Dockside channels. Finally, we have taken this opportunity, on our own motion, to make several rule revisions in our ongoing effort to streamline and eliminate rules that are no longer warranted.

VII. PROCEDURAL MATTERS

A. Regulatory Flexibility Act

59. A Supplemental Final Regulatory Flexibility Analysis with respect to this *Memorandum Opinion and Order* has been prepared and is included in Appendix A. A Final Regulatory Flexibility Analysis has been prepared for the *Second Report and Order* and is included in Appendix B.

B. Paperwork Reduction Act

60. This Order contains a new information collection. As part of our continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this Order, as required by the Paperwork Reduction Act of 1995.²⁰⁹ Public and agency comments are due 60 days from publication of the summary of this Order in the Federal Register, and OMB comments are due 60 days from that date. Comments should address:

- Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility.
- The accuracy of the Commission's burden estimates.
- Ways to enhance the quality, utility, and clarity of the information collected.
- Ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

61. In addition to filing comments with the Secretary, a copy of any comments on the labeling contained herein should be submitted to Judith B. Herman, Federal Communications Commission, Room 1-C804, 445 Twelfth Street, S.W., Washington, D.C. 20554, or via the Internet to JBoley@fcc.gov, and to Jeanette Thornton, OMB Desk Officer, Room 10236 New Executive Office Building, 725 Seventeenth Street, N.W., Washington, D.C. 20503, or via the Internet to jthornto@omb.eop.gov.

C. Alternative Formats

62. Alternative formats (computer diskette, large print, audio cassette and Braille) are available from Brian Millin at (202) 418-7426, TTY (202) 418-7365, or at bmillin@fcc.gov. This *Memorandum Opinion and Order and Second Report and Order* can also be downloaded at <http://wireless.fcc.gov/releases.html>.

²⁰⁹ Pub. L. No. 104-13.

D. Contact for Information

63. For further information, contact Guy Benson, Esquire at (202) 418-2946 <gbenson@fcc.gov>, Mr. Brian Marengo at 418-0838 <bmarengo@fcc.gov>, or John Evanoff, Esquire at 418-0848 <jevanoff@fcc.gov>, Policy and Rules Branch, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau.

VIII. ORDERING CLAUSES

64. Accordingly, IT IS ORDERED that, pursuant to Sections 1, 4(i), 303(f) and (r), 332, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 1, 154(i), 303(f) and (r), 332, and 405 the Petition for Reconsideration filed by Motorola, Inc. on November 13, 2000, IS DENIED.

65. IT IS FURTHER ORDERED that, pursuant to Sections 1, 4(i), 303(f) and (r), 332, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 1, 154(i), 303(f) and (r), 332, and 405 the Petition for Reconsideration filed by RadioShack Corporation on January 3, 2001, IS DENIED.

66. IT IS FURTHER ORDERED that, pursuant to Sections 1, 4(i), 303(f) and (r), 332, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 1, 154(i), 303(f) and (r), 332, and 405 the Petition for Reconsideration filed by the Personal Radio Steering Group, Inc. on November 13, 2000, IS GRANTED to the extent indicated herein and otherwise DENIED.

67. IT IS FURTHER ORDERED that, pursuant to Sections 1, 4(i), 303(f) and (r), 332, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 1, 154(i), 303(f) and (r), 332, and 405 the Petition for Reconsideration filed by William C. Easterday on November 13, 2000, IS DISMISSED as moot.

68. IT IS FURTHER ORDERED that, pursuant to Sections 1, 4(i), 303(f) and (r), 332, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 1, 154(i), 303(f) and (r), 332, and 405 the Petition for Reconsideration filed by the Personal Communications Industry Association, Inc. on November 13, 2000, is GRANTED.

69. IT IS FURTHER ORDERED that, pursuant to Sections 1, 4(i), 303(f) and (r), 332, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 1, 154(i), 303(f) and (r), 332, and 405 the Petition for Reconsideration filed by the American Association of State Highway and Transportation Officials on November 13, 2000, IS GRANTED to the extent indicated herein and otherwise DENIED.

70. IT IS FURTHER ORDERED that the amendments of the Commission's Rules as set forth in Appendix E ARE ADOPTED, effective thirty days from the date of publication in the Federal Register.

71. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Memorandum Opinion and Order and Second Report and Order*, WT Docket No. 98-182, including the Supplemental Final and Final Regulatory Flexibility Analyses, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

SUPPLEMENTAL FINAL REGULATORY FLEXIBILITY ANALYSIS
(*Memorandum Opinion and Order*)

1. As required by the Regulatory Flexibility Act (RFA),²¹⁰ a Final Regulatory Flexibility Analysis (FRFA) was incorporated in Appendix D of the *Report and Order and Further Notice of Proposed Rule Making (R&O)*.²¹¹ This Supplemental Final Regulatory Flexibility Analysis (SFRFA) considers the current *Memorandum Opinion and Order and Second Report and Order (MO&O)* and updates information contained in the FRFA. The present SFRFA, contained in the *MO&O*, conforms to the RFA.²¹²

Need For, and Objectives of, the *MO&O*

2. This proceeding was initiated in conjunction with the Commission's 1998 biennial review of regulations pursuant to Section 11 of the Communications Act of 1934, as amended (the Communications Act).²¹³ On September 30, 1998, the Commission adopted a *Notice* proposing a comprehensive review of the rules applicable to the PLMR services to determine which regulations were not in the public interest, obsolete, overly complex, required editorial change, or were redundant in nature.²¹⁴ In the *R&O* adopted June 29, 2000, the Commission, among other things: expanded the availability of thirty-one "dockside" frequencies, doubled the PLMR license term from five years to ten years, and increased the time period in which certain PLMR stations must be placed in operation. The Commission also clarified the frequency coordination process for Public Safety Pool channels in the 220-222 MHz band and authorized Public Safety Pool licensees to share their licensed radio facilities with federal public safety providers. In addition, the Commission clarified the definitions of centralized and decentralized trunking and established a new process for licensing trunked systems. Finally, the Commission "licensed by rule," *i.e.*, eliminated the individual licensing requirements for, five VHF frequencies that were allocated to the Part 90 Industrial/Business Pool for low power (1- or 2-watt) operations. Under this decision, the Commission reallocated the five VHF frequencies to the Part 95 Personal Radio Services and established a new Multi-Use Radio Service (MURS) under the Citizens Band Radio Services.

²¹⁰ See 5 U.S.C. § 604. The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract with America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

²¹¹ 1998 Biennial Regulatory Review -- 47 C.F.R. Part 90 - Private Land Mobile Radio Services, WT Docket No. 98-182, *Report and Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 16, 673, 16,714 (2000), Appendix D.

²¹² See 5 U.S.C. § 604.

²¹³ Section 11 requires us to review all our regulations applicable to providers of telecommunications service and determine whether any rule is no longer in the public interest as a result of meaningful economic competition between providers of telecommunications service, and whether such a regulation should be deleted or modified. See Section 11 of the Communications Act of 1934, as amended, 47 U.S.C. § 161.

²¹⁴ 1998 Biennial Regulatory Review -- 47 C.F.R. Part 90 - Private Land Mobile Radio Services, *Notice of Proposed Rulemaking*, WT Docket No. 98-182, 13 FCC Rcd 21,133 (1998) (*Notice*).

3. The rules adopted in this *MO&O* continue our efforts to consolidate and streamline the Part 90 Rules, allow more efficient use of the spectrum, and provide Part 90 licensees with greater flexibility and clarity concerning their operations. In particular, we affirm the decision to license by rule (i.e., eliminate individual licensing for, and instead license by rule) five VHF frequencies that were formerly licensed under Part 90 for low-power, industrial/business use, by placing frequencies in a new Part 95 Citizens Band Radio Service named the Multi-Use Radio Service (MURS). In addition, we decline to restrict the use of MURS to Part 90 Industrial/Business Pool eligibles. The general public is licensed by rule to use MURS for communications related to personal or business activities, and we revise the MURS technical rules to balance the benefits of adding technical flexibility against the disadvantages of potential degradation of the existing operations of business and industrial users.

Summary of Significant Issues Raised by the Public in Response to the FRFA

4. No reconsideration petitions discussed issues directly in response to the previous FRFA.

Description and Estimate of the Number of Small Entities To Which Rules Will Apply

5. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.²¹⁵ The RFA defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small business concern” under section 3 of the Small Business Act.²¹⁶ A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.²¹⁷ Nationwide, as of 1992, there were approximately 275,801 small organizations.²¹⁸ “Small governmental jurisdiction” generally means “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000.”²¹⁹ As of 1992, there were approximately 85,006 such jurisdictions in the United States.²²⁰ This number includes 38,978 counties, cities, and towns; of these, 37,566, or ninety-six percent, have populations of fewer than 50,000.²²¹ The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 81,600 (ninety-one percent) are small entities. Below, we further describe and estimate the number of small entity licensees and regulatees that may be affected by the proposed rules, if adopted.

6. *Public Safety radio services and Governmental entities.* As a general matter, Public Safety Radio Pool licensees include police, fire, local government, forestry conservation, highway maintenance,

²¹⁵ 5 U.S.C. § 603(b)(3).

²¹⁶ *Id.* § 601(3).

²¹⁷ *Id.* § 632.

²¹⁸ 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to the Office of Advocacy of the Small Business Administration).

²¹⁹ 5 U.S.C. § 601(5).

²²⁰ U.S. Dep’t of Commerce, Bureau of the Census, *1992 Census of Governments*.

²²¹ *Id.*

and emergency medical services.²²² The SBA rules contain a definition for small radiotelephone (wireless) companies, which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.²²³ There are a total of approximately 127,540 licensees within these services. Governmental entities as well as private businesses comprise the licensees for these services. The RFA also includes small governmental entities as a part of the regulatory flexibility analysis.²²⁴ "Small governmental jurisdiction" generally means "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000."²²⁵ As of 1992, there were approximately 85,006 such jurisdictions in the United States.²²⁶ This number includes 38,978 counties, cities and towns; of these, 37,566, or 96 percent, have populations of fewer than 50,000.²²⁷ The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, the Commission estimates that 81,600 (91 percent) are small entities.

7. *Estimates for PLMR Licensees.* Private land mobile radio systems serve an essential role in a vast range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories. Because of the vast array of PLMR users, the Commission has not developed a definition of small entities specifically applicable to PLMR users, nor has the SBA developed any such definition. The SBA rules do, however, contain a definition for small radiotelephone (wireless) companies.²²⁸ Included in this definition are business entities engaged in radiotelephone communications employing no more than 1,500 persons.²²⁹ According to the Bureau of the Census, only twelve radiotelephone firms of a total of 1,178 such firms which operated during 1992 had 1,000 or more employees. For the purpose of determining whether a licensee is a small business as defined by the SBA, each licensee would need to be evaluated within its own business area. The

²²² See subparts A and B of Part 90 of the Commission's Rules, 47 C.F.R. §§ 90.1-90.22. Police licensees include 26,608 licensees that serve state, county, and municipal enforcement through telephony (voice), telegraphy (code), and teletype and facsimile (printed material). Fire licensees include 22,677 licensees comprised of private volunteer or professional fire companies, as well as units under governmental control. Public Safety Radio Pool licensees also include 40,512 licensees that are state, county, or municipal entities that use radio for official purposes. There are also 7,325 forestry service licensees comprised of licensees from state departments of conservation and private forest organizations that set up communications networks among fire lookout towers and ground crews. The 9,480 state and local governments are highway maintenance licensees that provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. Emergency medical licensees (1,460) use these channels for emergency medical service communications related to the delivery of emergency medical treatment. Another 19,478 licensees include medical services, rescue organizations, veterinarians, handicapped persons, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities.

²²³ See 13 C.F.R. § 121.201 (NAICS code 513322).

²²⁴ See 5 U.S.C. § 601(5) (including cities, counties, towns, townships, villages, school districts, or special districts).

²²⁵ 5 U.S.C. § 601(5).

²²⁶ U.S. Dept. of Commerce, Bureau of the Census, "1992 Census of Governments."

²²⁷ *Id.*

²²⁸ See 13 C.F.R. § 121.201 (NAICS code 513322).

²²⁹ *Id.*

Commission's fiscal year 1994 annual report indicates that, at the end of fiscal year 1994, there were 1,101,711 licensees operating 12,882,623 transmitters in the PLMR bands below 512 MHz.²³⁰

8. *Equipment Manufacturers.* We anticipate that radio equipment manufacturers will be affected by our decisions in this proceeding. According to the SBA's regulations, a radio and television broadcasting and communications equipment manufacturer must have 750 or fewer employees in order to qualify as a small business concern.²³¹ Census Bureau data indicate that there are 858 U.S. firms that manufacture radio and television broadcasting and communications equipment, and that 778 of these firms have fewer than 750 employees and would therefore be classified as small entities.²³²

Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

9. We expect that, at most, the rules adopted herein will result in nominal new reporting, recordkeeping, or other compliance requirements imposed on entities affected in this proceeding.

Steps Taken To Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

10. The RFA requires an agency to describe any significant alternative that it has considered in reaching its proposed approach, which may include the following four alternatives, among others: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) and exemption from coverage.²³³

11. Regarding our decision to express maximum operating power in terms of transmit power output (TPO) rather than effective radiated power (ERP), *see MO&O* paras. 22-23, we do not believe that this will significantly impact small entities. Prior to the creation of MURS, the subject frequencies were restricted in terms of TPO, and our decision to retain this standard will provide continuity as well as the ability for users to utilize detachable gain-adding antennas (which would not be feasible were we to use the ERP standard).

12. Regarding our decision to restrict antenna height to 20 feet above structure or 60 feet above ground, whichever is higher, *see MO&O* paras. 24-25, we do not anticipate any significant impact on small entities. Prior to the creation of MURS, transmitting antennas using the subject frequencies were limited in height due to a provision that restricted the distance between the radio control point and the center of the radiating portion of the antenna.²³⁴ Consequently, the new antenna height limits should not affect small entities that continue to operate on the subject frequencies. Moreover, we believe that antenna height restrictions will benefit small entities in that such restrictions promote spectrum sharing and re-use of the frequencies, thus enabling more small entities to take advantage of this radio service.

²³⁰ See Federal Communications Commission, 60th Annual Report, Fiscal Year 1994 at 120-121.

²³¹ 13 C.F.R. § 121.201 (NAICS code 33422).

²³² U.S. Dept. of Commerce, *1992 Census of Transportation, Communications and Utilities* (issued May 1995) (NAICS code 33422).

²³³ See U.S.C. § 603.

²³⁴ See 47 C.F.R. §§ 90.35(c)(11), (14).

13. Regarding our decision to prohibit repeater operations, *see MO&O* para. 26, small (and other) entities wishing to extend the range of communications will not be allowed to do so. On balance, however, this restriction should benefit small entities in that it promotes spectrum sharing and frequency re-use, thus allowing a greater number of users to take advantage of this radio service. Moreover, any potential negative impact on small entities is mitigated due to our decision to grandfather existing operations on the subject frequencies. Consequently, any user that was authorized to use repeaters on the subject frequencies prior to the creation of MURS will continue to be allowed to do so. An alternative would be to allow repeater operations, but we believe that the resulting benefits of extended communications capabilities are outweighed by accommodating a greater number of users on these channels.

14. Regarding our decision to prohibit MURS radios from interconnecting with the Public Switched Network (PSN), *see MO&O* paras. 27-29, small (and other) entities that want to use MURS frequencies for telephone or other interconnected types of service will not be allowed to do so. Allowing interconnection, however, would be inconsistent with the intent of this radio service, which is a two-way, short distance voice and data communications service of *short duration*. Typically, communications over the PSN last longer than the types of communications envisioned for MURS. An alternative would be to allow interconnection, but because PSN interconnected communications are typically duplex in nature, thus occupying two of five channels in a given area, this would severely limit the number of available channels at one time. In this connection, we believe that the prohibition on PSN interconnection will likely generally benefit small entities in that such restrictions promote spectrum sharing and re-use of the frequencies, thus enabling more small entities to take advantage of this radio service. Finally, any potential negative impact on small entities is mitigated due to our decision to grandfather existing operations on the subject frequencies. Consequently, any user that was authorized to interconnect with the PSN on the subject frequencies prior to the creation of MURS will continue to be allowed to do so.

15. Our decision to prohibit MURS users from operating in the continuous carrier mode, *see MO&O* para. 30, could impact small (and other) entities in that they will be prevented from doing so, and the alternative would be to allow such operations. As with antenna height limits, repeater use, and PSN interconnection, however, we believe that the benefits of increased spectrum sharing and frequency re-use far outweigh the potential negative impact on small entities. Moreover, the potential impact on small entities is mitigated due to our decision to grandfather existing operations on the subject frequencies. Consequently, any user that was authorized to operate in the continuous carrier transmit mode on the subject frequencies prior to the creation of MURS will continue to be allowed to do so.

16. Regarding our decision to prohibit the transmission of lengthy data image signals over MURS, *see MO&O* para. 31, we do not anticipate any significant impact on small entities. Transmissions of this type of communications was never allowed on the subject frequencies and allowing them now in MURS would be inconsistent with the intent of the service.

17. We do not anticipate that our decision to change the permissible bandwidth from 12.5 kHz to 20 kHz for frequencies 154.570 MHz and 154.600 MHz, *see MO&O* paras. 33-35, will have any significant impact on small entities. Prior to the creation of MURS, the permissible bandwidth for these frequencies was 20 kHz, and changing it in the *R&O* to 12.5 kHz was an inadvertent error.

18. Our decision to prohibit the integration of MURS frequencies and FRS frequencies into a single radio unit, *see MO&O* para. 38, should not have a significant adverse impact on small entities. FRS is a narrowly tailored service intended for private two-way, very short distance voice communications for facilitating family and group activities. Small (and other) businesses are currently not eligible to operate on FRS frequencies and therefore, this prohibition should not have any adverse impact.

19. We also decline to delay the implementation of MURS by declining to adopt a transition/migration period, *see MO&O* para. 39, which might have assisted small entities that might face increased congestion and potential interference from the introduction of non-business operations on the subject frequencies. We have, however, adopted technical restrictions in this *Memorandum Opinion and Order* to mitigate the potential for harmful interference to small (and other) business operations. Furthermore, as noted above, as the subject frequencies are shared, business users were never insured of interference- or congestion-free operations. Finally, Motorola's suggested migration plan is too speculative, as it relies on the outcome of a pending proceeding. Consequently, based on the totality of the record, we believe that the public interest would not be served were we to delay MURS, and the impact, if any, of this decision on small entities is likely to be minimal.

20. Regarding our decision to update the airport terminal use (ATU) list, *see MO&O* paras. 48-49, we do not anticipate any significant impact on small entities. Small entities that wish to operate on these ATU frequencies will have expanded opportunities to do so. Moreover, this decision should have little impact on small entity non-airport terminal business radio users located near these airports, because such operations will continue to be allowed.

21. **Report to Congress:** The Commission will send a copy of this *Memorandum Opinion and Order*, WT Docket No. 98-182, including this Supplemental FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act, *see* 5 U.S.C. § 801(a)(1)(A). In addition, the Commission will send a copy of the *Memorandum Opinion and Order*, WT Docket No. 98-182, including this Supplemental FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A summary of the *Memorandum Opinion and Order*, WT Docket No. 98-182, including the Supplemental FRFA, will also be published in the Federal Register. *See* 5 U.S.C. § 604(b).

APPENDIX B

FINAL REGULATORY FLEXIBILITY ANALYSIS
(*Second Report and Order*)

1. As required by the Regulatory Flexibility Act (RFA),²³⁵ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Report and Order and Further Notice of Proposed Rule Making (Further Notice)*.²³⁶ The Commission sought written public comment on the proposals in the *Further Notice*, including comment on the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.²³⁷

Need for, and Objectives of, the Adopted Rules:

2. To further consolidate and streamline the Part 90 of the rules, reduce regulatory requirements, provide Part 90 licensees with greater flexibility concerning their operations, and promote increased spectrum sharing, the Commission amends Part 90 of its rules to (1) remove the restriction preventing school districts and authorities and park districts and authorities from being eligible for licenses in the Public Safety Pool; (2) remove the restriction preventing State highway maintenance systems from operating on certain channels in the Public Safety Pool; and (3) remove the power restriction on seven “dockside” channels in the Industrial/Business Pool.

3. These rule changes are needed in order to give park districts and authorities and school districts and authorities access to spectrum needed for important communications functions. Additionally, we believe that allowing such entities to operate on the Public Safety Pool channels will facilitate interoperability between park or school district personnel and other public safety entities, which can be very important especially during emergencies. Similarly, the inclusion of State highway maintenance systems on certain Public Safety Pool frequencies should give such systems access to spectrum needed for important communications functions. Finally, removal of the power restriction on the dockside channels will facilitate increased range and more reliable communications for Industrial/Business Pool eligibles.

Summary of Significant Issues Raised by Public Comments in Response to the IRFA.

4. No comments were submitted specifically in response to the IRFA. We have nonetheless considered the effect of these rule changes on small entities and considered other alternatives. We expect, however, that our actions will benefit all entities subject to these rule changes, including small entities.

Description and Estimate of the Number of Small Entities to Which Rules Will Apply:

²³⁵ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

²³⁶ 1998 Biennial Regulatory Review -- 47 C.F.R. Part 90 - Private Land Mobile Radio Services, WT Docket No. 98-182, *Report and Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 16, 673, 16,714 (2000), Appendix D.

²³⁷ See 5 U.S.C. § 604.

5. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.²³⁸ The RFA defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small business concern” under section 3 of the Small Business Act.²³⁹ A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.²⁴⁰ Nationwide, as of 1992, there were approximately 275,801 small organizations.²⁴¹ “Small governmental jurisdiction” generally means “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000.”²⁴² As of 1992, there were approximately 85,006 such jurisdictions in the United States.²⁴³ This number includes 38,978 counties, cities, and towns; of these, 37,566, or ninety-six percent, have populations of fewer than 50,000.²⁴⁴ The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 81,600 (ninety-one percent) are small entities. Below, we further describe and estimate the number of small entity licensees and regulatees that may be affected by the proposed rules, if adopted.

6. *Public Safety radio services and Governmental entities.* As a general matter, Public Safety Radio Pool licensees include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services.²⁴⁵ The SBA rules contain a definition for small radiotelephone (wireless) companies, which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.²⁴⁶ There are a total of approximately 127,540 licensees within these services. Governmental entities as well as private businesses comprise the licensees for these services. The RFA

²³⁸ 5 U.S.C. § 603(b)(3).

²³⁹ *Id.* § 601(3).

²⁴⁰ *Id.* § 632.

²⁴¹ 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to the Office of Advocacy of the Small Business Administration).

²⁴² 5 U.S.C. § 601(5).

²⁴³ U.S. Dep’t of Commerce, Bureau of the Census, *1992 Census of Governments*.

²⁴⁴ *Id.*

²⁴⁵ See subparts A and B of Part 90 of the Commission’s Rules, 47 C.F.R. §§ 90.1-90.22. Police licensees include 26,608 licensees that serve state, county, and municipal enforcement through telephony (voice), telegraphy (code), and teletype and facsimile (printed material). Fire licensees include 22,677 licensees comprised of private volunteer or professional fire companies, as well as units under governmental control. Public Safety Radio Pool licensees also include 40,512 licensees that are state, county, or municipal entities that use radio for official purposes. There are also 7,325 forestry service licensees comprised of licensees from state departments of conservation and private forest organizations that set up communications networks among fire lookout towers and ground crews. The 9,480 state and local governments are highway maintenance licensees that provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. Emergency medical licensees (1,460) use these channels for emergency medical service communications related to the delivery of emergency medical treatment. Another 19,478 licensees include medical services, rescue organizations, veterinarians, handicapped persons, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities.

²⁴⁶ See 13 C.F.R. § 121.201 (NAICS code 513322).

also includes small governmental entities as a part of the regulatory flexibility analysis.²⁴⁷ "Small governmental jurisdiction" generally means "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000."²⁴⁸ As of 1992, there were approximately 85,006 such jurisdictions in the United States.²⁴⁹ This number includes 38,978 counties, cities and towns; of these, 37,566, or 96 percent, have populations of fewer than 50,000.²⁵⁰ The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, the Commission estimates that 81,600 (91 percent) are small entities.

7. *Estimates for PLMR Licensees.* Private land mobile radio systems serve an essential role in a vast range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories. Because of the vast array of PLMR users, the Commission has not developed a definition of small entities specifically applicable to PLMR users, nor has the SBA developed any such definition. The SBA rules do, however, contain a definition for small radiotelephone (wireless) companies.²⁵¹ Included in this definition are business entities engaged in radiotelephone communications employing no more than 1,500 persons.²⁵² According to the Bureau of the Census, only twelve radiotelephone firms of a total of 1,178 such firms which operated during 1992 had 1,000 or more employees. For the purpose of determining whether a licensee is a small business as defined by the SBA, each licensee would need to be evaluated within its own business area. The Commission's fiscal year 1994 annual report indicates that, at the end of fiscal year 1994, there were 1,101,711 licensees operating 12,882,623 transmitters in the PLMR bands below 512 MHz.²⁵³

8. *Equipment Manufacturers.* We anticipate that radio equipment manufacturers will be affected by our decisions in this proceeding. According to the SBA's regulations, a radio and television broadcasting and communications equipment manufacturer must have 750 or fewer employees in order to qualify as a small business concern.²⁵⁴ Census Bureau data indicate that there are 858 U.S. firms that manufacture radio and television broadcasting and communications equipment, and that 778 of these firms have fewer than 750 employees and would therefore be classified as small entities.²⁵⁵

Description of Projected Reporting, Recordkeeping and Other Compliance Requirements:

9. The Rules adopted in this *Second Report and Order (Second R&O)* have minimal additional reporting or recordkeeping requirements for PLMR licensees.

²⁴⁷ See 5 U.S.C. § 601(5) (including cities, counties, towns, townships, villages, school districts, or special districts).

²⁴⁸ 5 U.S.C. § 601(5).

²⁴⁹ U.S. Dept. of Commerce, Bureau of the Census, "1992 Census of Governments."

²⁵⁰ *Id.*

²⁵¹ See 13 C.F.R. § 121.201 (NAICS Code 51322).

²⁵² *Id.*

²⁵³ See Federal Communications Commission, 60th Annual Report, Fiscal Year 1994 at 120-121.

²⁵⁴ 13 C.F.R. § 121.201, Standard Industrial Code (SIC) 3663.

²⁵⁵ U.S. Dept. of Commerce, *1992 Census of Transportation, Communications and Utilities* (issued May 1995), NAICS code 33422).

Steps Taken to Minimize Significant Economic Impact on Small Entities and Significant Alternatives Considered.

10. The RFA requires an agency to describe any significant alternative that it has considered in reaching its proposed approach, which may include the following four alternatives, among others: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) and exemption from coverage.²⁵⁶

11. Regarding our decision to eliminate eligibility restrictions on park districts and authorities and school districts and authorities so that these entities may obtain licenses to operate on Public Safety Pool channels, *see Second R&O* paras. 50-52, there should be no significant adverse impact on small entities. Indeed, small entities should benefit from this decision, as they will have greater opportunities for licensing now that they will be allowed to operate on the Public Safety Pool frequencies. An alternative to this proposal would be to retain the current rule, which would be unsatisfactory because it would leave the parks without any possibility of operating radio stations for the transmission of communications essential to their official activities.

12. Regarding our decision to eliminate the rule restricting State highway maintenance systems from operating on certain Public Safety Pool frequencies, *see Second R&O* paras. 53-54, we do anticipate any adverse impact on small entities. An alternative to this decision would be to continue the prohibition. This would, however, be unsatisfactory, as allowing State highway maintenance systems to operate on the subject frequencies furthers the important Commission goals of increased spectrum sharing and interoperability of public safety communications.

13. Finally, our decision to eliminate the power restriction on seven of the thirty-one “dockside” channels, *see Second R&O* paras. 55-57, should not have any adverse impact on small entities. The potential to pair these dockside frequencies with the AERS or other Industrial/Business Pool frequencies will result in greater opportunities for small (and other) business due to increased signal coverage and more reliable communications. In addition, concerns of harmful interference to existing low power users on the subject frequencies are mitigated, because operation on these frequencies will continue to require frequency coordination from a Commission-certified frequency coordinator.

14. **Report to Congress:** The Commission will send a copy of this *Second Report and Order*, WT Docket No. 98-182, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act, *see* 5 U.S.C. § 801(a)(1)(A). In addition, the Commission will send a copy of the *Second Report and Order*, WT Docket No. 98-182, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A summary of the *Second Report and Order*, WT Docket No. 98-182, including the FRFA, will also be published in the Federal Register. *See* 5 U.S.C. § 604(b).

²⁵⁶ 5 U.S.C. § 603.

APPENDIX C

LIST OF PARTIES
(*Memorandum Opinion and Order*)

The following is a list of parties filing petitions and responsive pleadings in response to the *Report and Order*. See *Report and Order and Further Notice of Proposed Rule Making* in WT Docket No. 98-182, 15 FCC Rcd 16,673 (2000).

Petitions for Reconsideration and/or Clarification were filed by:**Oppositions, Comments, and Replies to Petitions for Reconsideration were filed by:**

AAA Auto Club South, Inc.
ACS, Inc.
Albert Verdecia
Allan Schaefer
American Association of State Highway and Transportation Officials (AASHTO)
American Automobile Association (AAA)
Andre Ferchau
Association of Public Safety-Communications Officials-International (APCO)
Automobile Club of Hartford, Inc.
Automobile Club of Southern California (ACSC)
Bennett Z. Kobb
California State Automobile Association (CSAA)
College Station Independent School District
Corwin D. Moore Jr.
David H. Brothers Co., Inc.
David F. Reeder
Doug McLean
Dr. Michael C. Trahos, D.O., NCE, CET
Dr. Thomas E. H. Gruis
Earl & Brown Company, Inc.
The Family Security Company
Globe Wireless, Inc.
Harlan L. Cooley
Hexagram, Inc.
Industrial Telecommunications Association, Inc. (ITA)
John R. Scheuchenzuber
Katy Transportation Department
Land Mobile Communications Council (LMCC)
Lengemann of Florida
Merchant & Merchant
Michael D. Krumlauf
Motorola, Inc.
MRFAC, Inc. (MRFAC)
Personal Communications Industry Assn., Inc. (PCIA)
Personal Radio Steering Group Inc. (PRSG)
Peter Shipley
ProMarketing Inc.
RadioShack Corp.

Raymond A. Klatt
RIC
Ronald G. Mayworm
SAFETENET.com
Scott R. Havens
Small Business in Telecommunications (SBT)
Telonics, Inc.
Thomas P. Currie
Thomas Poff
Thomas Love
William C. Easterday
William L. Morgan
Wireless Solutions

APPENDIX D**LIST OF COMMENTERS
(*Second Report and Order*)**

The following is a list of parties filing comments and reply comments in response to the *Further Notice of Proposed Rule Making*. See *Report and Order and Further Notice of Proposed Rule Making*, WT Docket No. 98-182, 15 FCC Rcd 16,673 (2000).

Comments

APCO
College Independent School District
Globe Wireless, Inc.
Katy Independent School District
MRFAC
PCIA

Small Business in Telecommunications

Reply Comments

American Automobile Association (AAA)
Automobile Club of Hartford, Inc.
Automobile Club of Southern California
AAA Auto Club South, Inc.
California State Automobile Association
Ronald G. Mayworm

APPENDIX E
FINAL RULES

Part 0 of Chapter 1 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 0 – COMMISSION ORGANIZATION

1. The authority citation for Part 0 continues to read as follows:

Authority: Sec. 5, 48 Stat. 1068, as amended; 47 U.S.C. 155.

2. Section 0.331 is amended as follows:

§ 0.331 Authority delegated.

* * * * *

(d) *Authority concerning rulemaking proceedings.* The Chief, Wireless Telecommunications Bureau shall not have the authority to act upon notices of proposed rulemaking and inquiry, final orders in rulemaking proceedings and inquiry proceedings, and reports arising from any of the foregoing except such orders involving ministerial conforming amendments to rule parts, or orders conforming any of the applicable rules to formally adopted international conventions or agreements where novel questions of fact, law, or policy are not involved. In addition, revisions to the airport terminal use list in § 90.35(c)(61) of this chapter need not be referred to the Commission. Also, the addition of new Marine VHF frequency coordination committee(s) to § 80.514 of this chapter need not be referred to the Commission if they do not involve novel questions of fact, policy or law, as well as requests by the United States Coast Guard to:

* * * * *

Part 90 of Chapter 1 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 90 - PRIVATE LAND MOBILE RADIO SERVICES

3. The authority citation for Part 90 continues to read as follows:

Authority: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7).

4. Section 90.20 is amended to revise paragraph (a)(1)(i) to read as follows:

§ 90.20 Public Safety Pool

(a) * * *

(1) * * *

(i) A district and an authority;

5. Section 90.20(c)(3) is amended to delete the coordinator codes for the following frequencies:

§ 90.20 Public Safety Pool.

* * * * *

(c) * * *

(3)

Frequency or band	Coordinator
220.8025	
220.8075	
220.8125	
220.8175	
220.8225	
220.8275	
220.8325	
220.8375	
220.8425	
220.8475	
221.8025	
221.8075	
221.8125	
221.8175	
221.8225	
221.8275	
221.8325	
221.8375	
221.8425	
221.8475	

6. Section 90.20 is amended to remove note 43 from the following frequencies:

§ 90.20 Public Safety Pool

* * * * *

(c) * * *

(3) * * *

- 156.165..... Base or mobile. 42..... PH
- 156.1725.....do..... 27, 42...PH
- 156.180.....do..... 42..... PH
- 156.1875.....do..... 27, 42...PH
- 156.195.....do..... PH
- 156.2025.....do..... 27..... PH
- * * *
- 156.225.....do..... PH
- 156.2325.....do..... 27..... PH
- 156.240.....do..... 79..... PH

* * *

158.985.....do.....		PH
158.9925.....do.....	27.....	PH
159.000.....do.....		PH
159.0075.....do.....	27.....	PH
159.015.....do.....		PH
159.0225.....do.....	27.....	PH

* * *

159.045.....do.....		PH
159.0525.....do.....	27.....	PH
159.060.....do.....		PH
159.0675.....do.....	27.....	PH
159.075.....do.....		PH
159.0825.....do.....	27.....	PH

* * *

159.105.....do.....		PH
159.1125.....do.....	27.....	PH
159.120.....do.....		PH
159.1275.....do.....	27.....	PH
159.135.....do.....		PH
159.1425.....do.....	27.....	PH

* * *

159.165.....do.....		PH
159.1725.....do.....	27.....	PH

* * * * *

7. Section 90.20 is amended to remove and reserve paragraph (d)(43), to read as follows:

§ 90.20 Public Safety Pool.

* * * * *

(d) * * *

(43) [Reserved]

* * * * *

8. Section 90.35(b)(2)(iii) is amended to read as follows:

§ 90.35 Industrial/Business Pool

* * * * *

(b) * * *

(iii) For frequencies above 150 MHz, applications for new or modified facilities on frequencies shared prior to radio service consolidation by the former Manufacturers Radio Service, the Forest Products Radio Service, the Power Radio Service, the Petroleum Radio Service, the Motor

Carrier Radio Service, the Railroad Radio Service, the Telephone Maintenance Radio Service and the Automobile Emergency Radio Service may be coordinated by any certified Industrial/Business Pool coordinator. However, in the event that the interference contour of a proposed station would overlap the service contour of an existing station licensed on one of these previously shared frequencies, the written concurrence of the coordinator associated with the industry for which the existing station license was issued, or the written concurrence of the licensee of the existing station, shall be obtained. For the purposes of this § 90.35, the service contour for UHF stations is the 39 dBu contour; and the interference contour for UHF stations is the 21 dBu contour; the service contour for VHF stations is the 37 dBu contour; and the interference contour for VHF stations is the 19 dBu contour.

* * * * *

- 9. Section 90.35 is amended by removing note 11 from the following frequencies:

§ 90.35 Industrial/Business Pool.

* * * * *

(b) * * *

(3) * * *

- 457.525.....do..... 12, 47, 60
* * *
- 457.550.....do..... 12, 47, 60
* * *
- 457.5625.....do..... 12, 30, 47, 60
* * *
- 457.575.....do..... 12, 47, 60
* * *
- 457.5875.....do..... 12, 30, 47, 60
* * *
- 457.600.....do..... 12, 47, 60
* * *
- 457.6125.....do..... 12, 30, 47, 60

* * * * *

- 10. Sections 90.35(c)(60)(ii) and (c)(60)(iii) are amended as follows:

§ 90.35 Industrial/Business Pool

* * * * *

(c) * * *

(60)(ii) This frequency is also available for low power non-cargo handling operations, both voice and non-voice, on a secondary basis to cargo handling communications. Such operations are not subject to the power limitations in (c)(60)(i) of this Section on the following frequencies: 457.525 MHz, 457.550 MHz, 457.5625 MHz, 457.575 MHz, 457.5875 MHz, 457.600 MHz, and

457.6125 MHz. This frequency will not be assigned for non-cargo handling operations at temporary locations.

(iii) For mobile relay operations under (c)(60)(i), frequency pairing is as follows:

Mobile relay (MHz)\1\	Mobile (MHz)
457.525.....	467.750
457.53125.....	467.75625
457.5375.....	467.7625
457.54375.....	467.76875
457.550.....	467.775
457.55625.....	467.78125
457.5625.....	467.7875
457.56875.....	467.79375
457.575.....	467.800
457.58125.....	467.80625
457.5875.....	467.8125
457.59375.....	467.81875
457.600.....	467.825
457.60625.....	467.83125
457.6125.....	
457.61875.....	

\1\The mobile relay frequencies may also be used for single frequency simplex

* * * * *

§ 90.35 Industrial/Business Pool

11. Section 90.35 is amended to revise paragraph (c)(61)(iii) to read as follows.

§ 90.35 Industrial/Business Pool

* * * * *

(c) * * *

(61) * * *

(iii) To stations in the Industrial/Business Pool for secondary use at locations 16 km (10 miles) or more from the coordinates of the listed airports at a maximum transmitter power output of 2 watts. Use of the frequency is restricted to the confines of an industrial complex or manufacturing yard area. Stations licensed prior to [effective date of Order] may continue to operate with facilities authorized as of that date.

* * * * *

12. Section 90.35 is amended to revise paragraph (c)(61)(iv) to read as follows:

§ 90.35 Industrial/Business Pool

* * * * *

(61)* * *

(iv)

City and airport

Reference coordinates

	N. Latitude	W. Longitude ¹
Aberdeen, SD: Aberdeen Regional (ABR)	45°26'56.6"	98°25'18.6"
Agana, GU: Guam International (GUM)	13°29'00.4	144°47'45.5" E
Akron, OH: Akron-Canton Regional (CAK)	40°54'58.7"	81°26'32.9"
Alamosa, CO: San Luis Valley Regional/Bergman Field (ALS)	37°26'05.7"	105°51'59.6"
Albany, NY : Albany Int'l (ALB)	42°44'53.2"	73°48'10.7"
Albuquerque, NM: Albuquerque International Sunport (ABQ)	35°02'24.8"	106°36'33.1"
Allentown-Bethlehem, PA: Lehigh Valley Int'l (ABE)	40°39'08.5"	75°26'25.5"
Amarillo, TX: Amarillo International (AMA)	35°13'09.7"	101°42'21.3"
Anchorage, AK: Ted Stevens Anchorage International (ANC)	61°10'27.6"	149°59'46.3"
Appleton, WI: Outagamie County Regional (ATW)	44°15'26.7"	88°31'10.1"
Aspen, CO: Aspen-Pitkin County/Sardy Field (ASE)	39°13'23.4"	106°52'07.9"
Atlanta, GA: Atlanta International (ATL)	33°38'25.6"	84°25'37.0"
Dekalb-Peachtree (PDK)	33°52'32.2"	84°18'07.1"
Fulton County (FTY)	33°46'44.9"	84° 31'16.9"
Austin, TX: Austin Bergstrom International (AUS)	30°11'40.3"	97°40'11.5"
Bakersfield, CA:		

¹ Coordinates followed by an "E" are east longitude.

Meadows Field (BFL)	35°26'00.9"	119°03'24.4"
Baltimore, MD: Baltimore-Washington Int'l (BWI)	39°10'31.5"	76°40'05.5"
Baton Rouge, LA: Baton Rouge Metropolitan (BTR)	30°31'59.4"	91°08'58.7"
Billings, MT: Billings Logan International (BIL)	45°48'27.6"	108°32'34.3"
Birmingham, AL: Birmingham Int'l (BHM)	33°33'46.6"	86°45'12.8"
Bismarck, ND: Bismarck Municipal (BIS)	46°46'21.8"	100°44'44.7"
Boise, ID: Boise Air Terminal (BOI)	43°33'52.0"	116°13'22.0"
Boston, MA: Logan International (BOS)	42°21'51.7"	71°00'18.7"
Bozeman, MT: Gallatin Field (BZN)	45°46'36.8"	111°09'10.8"
Bridgeport, CT: Sikorsky Memorial (BDR)	41° 09'48.5"	73°07'34.2"
Buffalo, NY: Buffalo Niagara Int'l (BUF)	42°56'25.9"	78°43'55.8"
Burlington, VT: Burlington Int'l (BTV)	44°28'18.7"	73°09'11.8"
Cedar Rapids, IA: The Eastern Iowa (CID)	41°53'04.5"	91°42'39.1"
Charleston, SC: Charleston AFB/International (CHS)	32°53'55.1"	80°02'25.8"
Charlotte, NC: Charlotte-Douglas Int'l (CLT)	35°12'50.4"	80°56'35.3"
Chattanooga, TN: Lovell (CHA)	35° 02'06.9"	85°12'13.6"
Chicago, IL-Northwest, IN: Chicago-Wheeling-Palwaukee (PWK)	42°06'51.1"	87°54'05.3"
Meigs (CGX)	41°51'31.8"	87°36'28.5"
South Bend Regional (SBN)	41°42'32.2"	86°19'06.5"
Midway (MDW)	41°47'09.5"	87°45'08.7"
O'Hare International (ORD)	41°58'46.5"	87° 54'16.1"
West Chicago-Dupage (DPE)	41°54'24.8"	88°14'54.3"
Cincinnati, OH: Cincinnati-Blue Ash (ISZ)	39°14'48.1"	84°23'20.3"
Lunken (LUK)	39°06'12.0"	84°25'07.0"
Cleveland, OH: Burke Lakefront (BKL)	41°31'03.0"	81°41'00.0"
Cuyahoga County (CGF)	41°33'54.5"	81°29'10.9"
Hopkins International (CLE)	41°24'39.2"	81°50'57.8"
Columbia, SC: Columbia Metropolitan (CAE)	33°56'19.8"	81°07'10.3"
Columbus, GA: Columbus Metropolitan (CSG)	32°30'58.8"	84°56'19.9"
Columbus, OH: Port Columbus Int'l (CMH)	39°59'52.8"	82°53'30.8"

Rickenbacker International (LCK)	39°48'49.5"	82°55'40.3"
Corpus Christi, TX: Corpus Christi International (CRP)	27°46'13.3"	97°30'04.4"
Covington/Cincinnati, KY: Cincinnati/Northern Kentucky Int'l (CVG)	39°02'46.1"	84°39'43.8"
Crescent City, CA: Jack McNamara Field (CEC)	41°46'48.6"	124°14'11.5"
Dallas, TX: Addison (ADS)	32°58'06.8"	96°50'11.2"
Dallas-Ft. Worth Int'l (DFW)	32°53'45.4"	97°02'13.9"
Dallas-Love Field (DAL)	32°50'49.6"	96°51'06.4"
Red Bird (RBD)	32°40'51.1"	96°52'05.5"
Davenport, IA (Rock Island, Moline, IL): Davenport Municipal (DVN)	41°36'37.0"	90°35'18.0"
Quad City (MLI)	41°26'54.7"	90°30'27.1"
Dayton, OH: Dayton International (DAY)	39°54'08.6"	84°13'09.8"
Denver, CO: Centennial (APA)	39°34'12.5"	104°50'57.5"
Colorado Springs Municipal (COS)	38°48'20.9"	104°42'00.9"
Jeffco (BJC)	39°54'31.6"	105°07'01.9"
.....	39°51'30.3"	104°40'01.2"
Denver International (DEN)		
Des Moines, IA: Des Moines Int'l (DSM)	41°32'05.8"	93°39'38.5"
.....		
Detroit, MI: Detroit City (DET)	42°24'33.1"	83°00'35.5"
Detroit Metro-Wayne County (DTW)	42°12'43.4"	83°20'55.8"
Oakland-Pontiac (PTK)	42°39'54.7"	83°25'07.4"
Willow Run (YIP)	42°14'16.5"	83°31'49.5"
Duluth, MN: Duluth International (DLH)	46°50'31.5"	92°11'37.1"
Durango, CO: Durango-La Plata County (DRO)	37°09'05.5"	107°45'13.6"
Eagle, CO: Eagle County Regional (EGE)	39°38'33.2"	106°55'03.7"
El Paso, TX: El Paso International (ELP)	31°48'24.0"	106°22'40.1"
Eugene, OR: Mahlon Sweet Field (EUG)	44°07'23.7"	123°13'07.3"
Eureka, CA: Eureka Municipal (033)	40°46'51.4"	124°12'44.2"
Fargo, ND: Hector International (FAR)	46°55'09.7"	96°48'53.9"
.....		
Flint, MI: Bishop (FNT)	42°57'55.8"	83°44'36.4"
Ft. Lauderdale-Hollywood, FL: Ft. Lauderdale Executive (FXE)	26°11'50.2"	80°10'14.6"
.....	26°04'21.3"	80°09'09.9"
Ft. Lauderdale-Hollywd Int'l (FLL)		
Ft. Meyers, FL: Page Field (FMY)	26°35'11.8"	81°51'47.7"

Ft. Meyers, FL: Southwest Florida International (RSW)	26°32'10.2"	81°45'18.6"
Ft. Wayne, IN: Fort Wayne International (FWA)	40°58'42.5"	85°11'42.5"
Ft. Worth, TX: Fort Worth Alliance (AFW)	32°59'12.5" 32°49'11.2"	97°19'07.7" 97°21'44.8"
Meacham (FTW)		
Fresno, CA: Fresno-Chandler Downtown (FCH)	36°43'56.5" 36°46'34.3"	119°49'11.6" 119°43'05.3"
Fresno Yosemite Int'l (FAT)		
Gainesville, FL: Gainesville Regional (GNV)	29°41'24.2"	82°16'18.4"
Grand Forks, ND: Grand Forks International (GFK)	47°56'57.3"	97°10'34.0"
Grand Rapids, MI: Gerald R. Ford Int'l (GRR)	42°52'51.0"	85°31'22.1"
Great Falls, MT: Great Falls International (GTF)	47°28'55.2"	111°22'14.5"
Green Bay, WI: Austin Straubel Int'l (GRB)	44°29'06.3"	88°07'46.5"
Greensboro, NC: Piedmont Tirad International (GSO)	36°05'51.9"	79°56'14.3"
Greer, SC: Greenville-Spartanburg Int'l (GSP)	34°53'44.4"	82°13'07.9"
Gunnison, CO: Gunnison County (GUC)	38°32'02.2"	106°55'58.9"
Hana, HI: Hana (HNM)	20°47'44.3"	156°00'52.0"
Harlingen, TX: Valley International (HRL)	26°13'42.6"	97°39'15.8"
Harrisburg, PA: Capital City (CXY)	40°13'01.7"	76°51'05.3"
Harrisburg Int'l (MDT)	40°11'36.6"	76°45'48.3"
Hartford, CT (Windsor Locks): Bradley Int'l (BDL)	41°56'20.0"	72°40'59.6"
Hartford-Brainard (HFD)	41°44'10.6"	72°39'00.8"
Hayden, CO: Yampa Valley (HDN)	40°28'52.2"	107°13'03.6"
Hilo, HI: Hilo Int'l (ITO)	19°43'12.9"	155°02'54.5"
Honolulu, HI: Honolulu International (HNL)	21°19'07.3"	157°55'20.7"
Houston, TX: W.P. Hobby (HOU)	29°38'43.5"	95°16'44.0"
D.W. Hooks Memorial (DWH)	30°03'42.7"	95°33'10.0"
George Bush Intercontinental (IAH)	29°58'49.7"	95°20'23.0"
Indianapolis, IN: Indianapolis Int'l (IND)	39°43'02.4"	86°17'39.8"
Jackson Hole, WY:		

Jackson Hole (JAC)	43°36'26.4"	110°44'15.9"
Jacksonville, FL: Craig Municipal (CRG)	30°20'10.8"	81°30'52.0"
Jacksonville Int'l (JAX)	30° 29'38.6"	81°41'16.3"
Kalamazoo, MI: Kalamazoo/Battle Creek International (AZO)	42°14'05.5"	85°33'07.4"
Kalispell, MT: Glacier Park International (FCA)	48°18'41.1"	114°15'18.2"
Kansas City, MO-KS: Kansas City Int'l (MCI)	39°17'51.4"	94°42'50.1"
Kansas City Municipal Dntn (MKC)	39°07'23.7"	94°35'33.9"
Kauna Kakai, HI: Molokai (MKK)	21°09'10.4"	157°05'46.5"
Knoxville, TN: Mc Ghee Tyson (TYS)	35°48'44.9"	83°59'34.3"
Lacrosse, WI: Lacrosse Municipal (LSE)	43°52'46.5"	91°15'24.6"
Lansing, MI: Capital City (LAN)	42°46'43.3"	84°35'14.5"
Las Vegas, NV: McCarran Int'l (LAS)	36° 04'49.3"	115°09'08.4"
Lihue, HI: Lihue (LIH)	21°58'33.5"	159°20'20.3"
Lincoln, NE: Lincoln Municipal (LNK)	40°51'03.5"	96°45'33.3"
Little Rock, AR: Adams Field (LIT)	34°43'48.8"	92°13'27.3"
Los Angeles, CA: Burbank-Glendale-Pasadena (BUR)	34°12'02.2"	118°21'30.6"
.....	33°24'17.8"	118°24'57.1"
Catalina (AVX)	33°49'03.8"	118°09'05.8"
Long Beach-Daugherty Field (LGB)	33°56'33.1"	118°24'29.1"
.....	34°03'21.6"	117°36'04.3"
Los Angeles Int'l (LAX)	33°40'32.4"	117°52'05.6"
Ontario Int'l (ONT)		
Santa Ana-John Wayne-Orange City (SNA)		
Louisville, KY: Louisville Int'l-Standiford Field (SDF)	38°10'27.8"	85°44'09.6"
Lubbock, TX: Lubbock International (LBB)	33°39'49.1"	101°49'22.0"
Lynchburg, VA: Lynchburg Regional-Preston Glen Field (LYH)	37°19'36.1"	79°12'01.6"
Madison, WI: Dane County Regional-Truax Field (MSN)	43°08'23.5"	89°20'15.1"
Manchester, NH: Manchester (MHT)	42°56'04.3"	71°26'13.4"
Memphis, TN: Memphis Int'l (MEM)	35°02'32.7"	89°58'36.0"
Miami, FLA:		

Miami Int'l (MIA)	25°47'35.7"	80°17'26.0"
Opa Locka (OPF)	25°54'25.2"	80°16'42.2"
Kendall-Tamiami Executive (TMB)	25°38'52.4"	80°25'58.0"
Milwaukee, WI: General Mitchell Int'l (MKE)	42°56'50.0"	87°53'47.7"
Minneapolis-St. Paul, MN: Minneapolis-St. Paul Int'l (MSP)	44°52'49.9"	93°13'00.9"
Minot, ND: Minot International (MOT)	48°15'33.8"	101°16'49.2"
Missoula, MT: Missoula International (MSO)	46°54'58.7"	114°05'26.0"
Mobile, AL: Mobile Regional (MOB)	30°41'29.1"	88°14'34.2"
Modesto, CA: Modesto City-County (MOD)	37°37'32.9"	120°57'15.9"
Monterey, CA: Monterey Peninsula (MRY)	36°35'13.1"	121°50'34.6"
Montrose, CO: Montrose Regional (MTJ)	38°30'31.9"	107°53'37.8"
Nashville, TN: Nashville Int'l (BNA)	36°07'28.1"	86°40'41.5"
New Haven, CT: Tweed-New Haven Municipal (HVN)	41°15'50.0"	72°53'13.6"
New Orleans, LA: Lakefront (NEW)	30°02'32.7"	90°01'41.7"
New Orleans Int'l (MYS)	29°59'36.2"	90°15'28.9"
Newburgh, NY: Stewart International (SWF)	41°30'14.7"	74°06'17.4"
Newport News-Hampton, VA: Newport News/ Williamsburg (PHF)	37°07'54.8"	76°29'34.8"
New York-Northeast, NJ: Republic (FRG)	40°43'43.6"	73°24'48.3"
JFK International (JFK)	40°38'23.1"	73°46'44.1"
LaGuardia (LGA)	40°46'38.1"	73°52'21.4"
Long Island-McArthur (ISP)	40°47'42.8"	73°06'00.8"
Morristown Municipal (NJ) (MMU)	40°47'57.7"	74°24'53.5"
Newark Int'l (FWR)	40°41'32.9"	74°10'07.2"
Teterboro (NJ) (TEB)	40°51'00.4"	74°03'39.0"
Norfolk, VA: Norfolk Int'l (ORF)	36°53'40.6"	76°12'04.4"
Oklahoma City, OK: Wiley Post (PWA)	35°32'04.4"	97°38'49.9"
Will Rogers World (OKC)	35°23'35.1"	97°36'02.6"
Omaha, NE: Eppley Airfield (OMA)	41°18'09.1"	95° 53'39.0"
Orlando, FL: Orlando Executive (ORL)	28°32'43.7"	81°19'58.6"
Orlando Int'l (MCO)	28°25'44.0"	81°18'57.7"
Palm Springs, CA: Palm Springs International (PSP)	33°49'46.8"	116°30'24.1"
Peoria, IL: Greater Peoria Regional (PIA)	40°39'51.3"	89°41'35.9"

Philadelphia, PA-NJ: Northeast Philadelphia (PNE)	40°04'55.0"	75°00'38.1"
Philadelphia Int'l (PHL)	39°52'19.0"	75°14'28.1"
Phoenix, AZ: Phoenix-Sky Harbor Int'l (PHX)	33°26'03.0"	112°00'29.0"
Scottsdale (SDL)	33°37'22.3"	111°54'37.9"
Pittsburgh, PA: Allegheny County (AGC)	40°21'15.9"	79°55'48.9"
Pittsburgh Int'l (PIT)	40°29'29.3" N	80°13'58.3"
Portland, ME: Portland International Jetport (PWM)	43°38'46.2"	70°18'31.5"
Portland, OR: Portland-Hillsboro (HIO)	45°32'25.4"	122°56'59.4"
Portland International (PDX)	45°35'19.4"	122°35'51.0"
Portland-Troutdale (TTD)	45°32'57.7"	122°24'04.5"
Providence-Pawtucket, RI--MA: North Central State (SFZ)	41°55'14.7"	71°29'29.0"
T.F. Green State (PVD)	41°43'26.4"	71°25'41.6"
Pueblo, CO: Pueblo Memorial (PUB)	38°17'20.7"	104°29'47.7"
Raleigh/Durham, NC: Raleigh-Durham International (RDU)	35°52'39.5"	78°47'14.9"
Rapid City, SD: Rapid City Regional (RAP)	44°02'43.2"	103°03'26.5"
Reno, NV: Reno/Tahoe International (RNO)	39°29'54.8"	119°46'05.0"
Richmond, VA: Richmond International (RIC)	37°30'18.6"	77°19'10.8"
Roanoke, VA: Roanoke Regional/Woodrum Field (ROA)	37°19'31.7"	79°58'31.5"
Rochester, MN: Rochester International (RST)	43°54'26.0"	92°29'56.4"
Rochester, NY: Greater Rochester Int'l (ROC)	43°07'07.9"	77°40'20.6"
Sacramento, CA: Sacramento Executive (SAC)	38°30'45.1"	121°29'36.5"
Sacramento Int'l (SMF)	38°41'43.5"	121°35'26.8"
Saginaw, MI: MBS International (MBS)	43°31'58.5"	84°04'46.7"
Saipan Isl., CQ: Saipan International (GSN)	15°07'08.4"	145°43'45.7" E
St. Louis, MO--IL: Spirit of St. Louis (SUS)	38°39'42.7"	90°39'04.4"
St. Louis-Lambert Int'l (STC)	38°44'51.7"	90°21'35.9"
St. Petersburg, FL: Albert Whitted Municipal (SPG)	27°45'54.4"	82°37'37.1"
St. Petersburg Clearwater Int'l (PIE)	27°54'38.8"	82°41'14.9"
Salt Lake City, UT: Salt Lake City Int'l (SLC)	40°47'18.2"	111°58'39.9"

San Antonio, TX: San Antonio Int'l (SAT)	29°32'01.3"	98°28'11.2"
San Diego, CA: San Diego Lindbergh Int'l (SAN)	32°44'00.8"	117°11'22.8"
San Francisco-Oakland, CA: Metropolitan Oakland Int'l (OAK)	37°43'16.7"	122°13'14.6"
San Francisco Int'l (SFO)	37°37'08.4"	122°22'29.4"
San Jose, CA: San Jose Int'l (SJC)	37°21'42.7"	121° 55'44.4"
San Juan, PR: Luis Munoz (SJU)	18°26'21.9"	66°00'06.6"
Santa Barbara, CA: Santa Barbara Municipal (SBA)	34°25'34.4"	119°50'25.3"
Santa Fe, NM: Santa Fe Municipal (SAF)	35°37'00.4"	106°05'17.3"
Sarasota, FL: Sarasota/Bradenton International (SRQ)	27°23'43.2"	82°33'14.8"
Savannah, GA: Savannah International (SAV)	32°07'39.3"	81°12'07.7"
Seattle, WA: Boeing/King County Int'l (BFI)	47°26'47.9"	122°18'33.5"
Seattle-Tacoma Int'l (SEA)	47°26'56.3"	122°18'33.5"
Shreveport, LA: Shreveport Downtown (DTN)	32°32'24.8"	93°44'42.1"
Shreveport Regional (SHV)	32°26'47.9"	93°49'32.2"
Sioux City, IA: Sioux Gateway (SUX)	42°24'09.4"	96°23'03.7"
Sioux Falls, SD: Joe Foss Field (FSD)	43°34'52.9"	96°44'30.1"
South Bend, IN: South Bend Regional (SBN)	41°42'32.2"	86°19'06.5"
Spokane, WA: Grant County Int'l(MWH)	47°12'27.5"	119°19'12.7"
Spokane Int'l (GEG)	47°37'11.5"	117°32'01.8"
Springfield, MA: Barnes Municipal (BAF)	42°09'27.8"	72°42'56.2"
Westover ARB/Metropolitan (CEF)	42°11'53.8"	72°32'03.3"
Springfield, MO: Springfield-Branson Regional (SGF)	37°14'39.6"	93°23'12.7"
Syracuse, NY: Syracuse-Hancock Int'l (SYR)	43°06'40.3"	76°06'22.7"
Tacoma, WA: Tacoma Narrows (TIW)	47°16'04.6"	122°34'41.2"
Tallahassee, FL: Tallahassee Regional (TLH)	30°23'47.5"	84°21'01.2"
Tampa, FL: Tampa Int'l (TPA)	27°58'31.7"	82°31'59.7"
Telluride, CO: Telluride Regional (TEX)	37°57'13.5"	107°54'30.5"
Toledo, OH:		

Toledo Express (TOL)	41°35'12.5"	83°48'28.2"
Trenton, NJ-PA: Trenton Mercer (TTN)	40°16'36.1"	74°48'48.5"
Tucson, AZ: Tucson Int'l (TUS)	32°06'57.9"	110°56'27.7"
Tulsa, OK: R.L. Jones, Jr. (RVS)	36°02'22.7"	95°59'04.7"
Tulsa Int'l (TUL)	36°11'54.1"	95°53'17.7"
Washington, DC: Dulles International (IAD)	38°56'40.3"	77°27'20.9"
Ronald Reagan National (DCA)	38°51'07.5"	77°02'15.8"
Waterloo, IA: Waterloo Municipal (ALO)	42°33'25.5"	92°24'01.2"
West Palm Beach, FL: Palm Beach International (PBI)	26°40'59.4"	80°05'44.1"
White Plains, NY: Westchester County (HPN)	41°04'01.1"	73°42'27.3"
Wichita, KS: Mid-Continent (ICT)	37°38'59.9"	97°25'58.9"
Scranton, PA: Wilkes-Barre/Scranton Int'l (AVP)	41°20'17.3"	75°43'27.4"
Wilmington, DE: New Castle County (ILG)	39°40'43.4"	75°36'23.5"
Worcester, MA: Worcester Regional (ORH)	42°16'02.4"	71°52'32.6"
Youngstown-Warren, OH-PA: Youngstown-Warren Regional (YNG)	41°15'38.7"	80°40'44.8"

13. Section 90.175(b)(1) is amended to read as follows:

§ 90.175 Frequency coordination requirements.

* * * * *

(b) *For frequencies between 25 and 470 MHz:* (1) A statement is required from the applicable frequency coordinator as specified in §§ 90.20(c)(2) and 90.35(b) recommending the most appropriate frequency. In addition, for frequencies above 150 MHz, if the interference contour of a proposed station would overlap the service contour of a station on a frequency formerly shared prior to radio service consolidation by licensees in the Manufacturers Radio Service, the Forest Products Radio Service, the Power Radio Service, the Petroleum Radio Service, the Motor Carrier Radio Service, the Railroad Radio Service, the Telephone Maintenance Radio Service or the Automobile Emergency Radio Service, the written concurrence of the coordinator for the industry-specific service, or the written concurrence of the licensee itself, must be obtained. Requests for concurrence must be responded to within 20 days of receipt of the request. The written request for concurrence shall advise the receiving party of the maximum 20 day response period. The coordinator's recommendation may include comments on technical factors such as power, antenna height and gain, terrain and other factors which may serve to minimize potential interference. In addition:

* * * * *

14. Section 90.210 is amended to read as follows:

§ 90.210 Emission masks.

* * * * *

(b) Emission Mask B. For transmitters that are equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier power (P) as follows:

* * *

(c) Emission Mask C. For transmitters that are not equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier output power (P) as follows:

* * *

(g) Emission Mask G. For transmitters that are not equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier power (P) as follows:

* * *

(h) Emission Mask H. For transmitters that are not equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier power (P) as follows:

* * *

(i) Emission Mask I. For transmitters that are equipped with an audio low pass filter, the power of any emission must be attenuated below the unmodulated carrier power of the transmitter (P) as follows:

* * *

(j) Emission Mask J. For transmitters that are not equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier power of the transmitter (P) as follows:

* * * * *

15. Section 90.242 is amended to revise paragraph (a)(1) to read as follows:

§ 90.242 Travelers' information stations.

* * * * *

(a) * * *

(1) [Reserved]

Part 95 of Chapter 1 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 95 - PERSONAL RADIO SERVICES

16. The authority citation for Part 95 continues to read as follows:

Authority: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303.

17. Section 95.401 is amended by revising paragraph (f) as follows:

§ 95.401 (CB Rule 1) What are the Citizens Band Radio Services?

* * * * *

(f) The Multi-Use Radio Service (MURS) -- a private, two-way, short-distance voice or data communications service for personal or business activities of the general public. The rules for this service are contained in subpart J of this part.

18. Section 95.603 is amended by revising paragraph (g) as follows:

§ 95.603 Certification required.

* * * * *

(g) Each Multi-Use Radio Service transmitter (a transmitter that operates or is intended to operate in the MURS) must be certificated in accordance with Subpart J of Part 2 of this chapter, Provided however, that those radio units certificated as of [**effective date of Order**] need not be recertificated.

19. Section 95.631 is amended by revising paragraph (j) as follows:

§ 95.631 Emission types.

* * * * *

(j) A MURS transmitter must transmit only emission types A1D, A2B, A2D, A3E, F2B, F1D, F2D, F3E, G3E. Emission types A3E, F3E and G3E include selective calling or tone-operated squelch tones to establish or continue voice communications. MURS transmitters are prohibited from transmitting in the continuous carrier mode.

20. Section 95.632 is amended by revising paragraph (b) as follows:

§ 95.632 MURS transmitter frequencies.

* * * * *

(b) The authorized bandwidth is 11.25 kHz on frequencies 151.820 MHz, 151.880 MHz and 151.940 MHz. The authorized bandwidth is 20.0 kHz on frequencies 154.570 and 154.600 MHz.

21. Section 95.633 is amended by revising paragraph (f) and adding paragraphs 1, 2, and 3, to read as follows:

§ 95.633 Emission bandwidth.

* * * * *

(f) The authorized bandwidth for any emission type transmitted by a MURS transmitter is specified as follows:

(1) Emissions on frequencies 151.820 MHz, 151.880 MHz, and 151.940 MHz are limited to 11.25 kHz.

(2) Emissions on frequencies 154.570 and 154.600 MHz are limited to 20.0 kHz.

(3) Provided, however, that all A3E emissions are limited to 8 kHz.

22. Section 95.635 is amended by revising paragraph (e) to read as follows:

§ 95.635 Unwanted radiation.

(e) For transmitters designed to operate in the MURS, transmitters shall comply with the following:

Frequency	Mask with audio low pass filter	Mask without audio low pass filter
151.820 MHz, 151.880 MHz and 151.940 MHz	(1)	(1)
154.570 MHz and 154.600 MHz	(2)	(3)

(1) *Emission Mask 1* -- For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

(i) On any frequency from the center of the authorized bandwidth f_0 to 5.625 kHz removed from f_0 : Zero dB.

(ii) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.625 kHz but no more than 12.5 kHz: at least $7.27(f_d - 2.88 \text{ kHz})$ dB.

(iii) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz: at least $50 + 10 \log(P)$ dB or 70 dB, whichever is the lesser attenuation.

(2) *Emission Mask 2* -- For transmitters designed to operate with a 25 kHz channel bandwidth that are equipped with an audio low-pass filter, the power of any emission must be below the unmodulated carrier power (P) as follows:

(i) On any frequency removed from the assigned frequency by more than 50 percent, but not more than 100 percent of the authorized bandwidth: at least 25 dB.

(ii) On any frequency removed from the assigned frequency by more than 100 percent, but not more than 250 percent of the authorized bandwidth: at least 35 dB.

(iii) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: at least $43 + 10 \log(P)$ dB.

(3) *Emission Mask 3* -- For transmitters designed to operate with a 25 kHz channel bandwidth that are not equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier output power (P) as follows:

(i) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5 kHz, but not more than 10 kHz: at least $83 \log(f_d/5)$ dB.

(ii) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 10 kHz, but not more than 250 percent of the authorized bandwidth: at least $29 \log(f_d/11)$ dB or 50 dB, whichever is the lesser attenuation.

(iii) On any frequency removed from the center of the authorized bandwidth by more than 250 percent of the authorized bandwidth: at least $43 + 10 \log(P)$ dB.

23. Section 95.639(h) is amended by revising paragraph (h) as follows:

§ 95.639 Maximum transmitter power.

* * * * *

(h) No MURS unit, under any condition of modulation, shall exceed 2 Watts transmitter power output.

24. Section 95.655 is amended by adding paragraph (d) to read as follows:

§ 95.655 Frequency capability.

* * * * *

(d) No transmitter will be certificated for use in MURS if it is equipped with a frequency capability not listed in § 95.632.

25. Section 95.1307 is amended to read as follows:

§ 95.1307 Permissible communications.

(a) MURS stations may transmit voice or data signals as permitted in this subpart.

(b) A MURS station may transmit any emission type listed in § 95.631(j) of this chapter.

(c) MURS frequencies may be used for remote control and telemetering functions. MURS transmitters may not be operated in the continuous carrier transmit mode.

(d) MURS users shall take reasonable precautions to avoid causing harmful interference. This includes monitoring the transmitting frequency for communications in progress and such other measures as may be necessary to minimize the potential for causing interference.

26. A new Section 95.1311 is added as follows:

§ 95.1311 Repeater operations and signal boosters prohibited.

MURS stations are prohibited from operating as a repeater station or as a signal booster. This prohibition includes store-and-forward packet operation.

27. A new Section 95.1313 is added as follows:

§ 95.1313 Interconnection prohibited.

MURS stations are prohibited from interconnection with the public switched network.

Interconnection Defined. Connection through automatic or manual means of multi-use radio stations with the facilities of the public switched telephone network to permit the transmission of messages or signals between points in the wireline or radio network of a public telephone company and persons served by multi-use radio stations. Wireline or radio circuits or links furnished by common carriers, which are used by licensees or other authorized persons for transmitter control (including dial-up transmitter control circuits) or as an integral part of an authorized, private, internal system of communication or as an integral part of dispatch point circuits in a multi-use radio station are not considered to be interconnection for purposes of this rule part.

28. A new Section 95.1315 is added as follows:

§ 95.1315 Antenna height restriction.

The highest point of any MURS antenna must no be more than 18.3 meters (60 feet) above the ground or 6.10 meters (20 feet) above the highest point of the structure on which it is mounted.

29. A new Section 93.1317 is added as follows:

§ 95.1317 Grandfathered MURS Stations.

Stations that were licensed under Part 90 of the Commission's Rules to operate on MURS frequencies as of November 13, 2000, are granted a license by rule that authorizes continued operations under the terms of such nullified Part 90 authorizations, including any rule waivers.