Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

FCC 95-412

In the Matter of	)	
	)	
Amendment of Parts 73 and 74 of	)	
the Commission's Rules to Permit	)	MM Docket No. 94-130
Unattended Operation of Broadcast	)	
Stations and to Update Broadcast	)	
Station Transmitter Control and	)	
Monitoring Requirements.	)	

REPORT AND ORDER

Adopted: October 2, 1995 ; Released: October 23, 1995

By the Commission:

INTRODUCTION

1. The Commission herein amends Parts 73 and 74 of its Rules to waive Section 318 of the Communications Act of 1934, as amended, ("Act") to eliminate the requirement that a broadcast station must have a licensed radio operator on duty in charge of the transmitter during all periods of broadcast operation. This waiver includes both the requirement that an operator be present during broadcast operation and the requirement that any optionally employed operator hold the Restricted Radiotelephone Permit[1] ("RP"). Also, a number of changes are made in the rules relating to the control of broadcast stations to make them relevant to unattended operation and to bring them up to date with respect to current broadcast technology.

BACKGROUND

2. Section 318 of the Act requires transmitting apparatus in radio stations to be operated by FCC-licensed radiotelephone operators, subject to waiver of the requirement by the Commission. Prior to 1992, however, certain types of stations, including broadcast stations, could not have the operator requirement waived. The Telecommunications Authorization Act of 1992, Pub. L. No. 102-538, 106 Stat. 3533 ("Law"), Section 205(1) amended Section 318 of the Act to delete the expression "(3) stations engaged in broadcasting..." from the list of stations for which waivers were not allowed. This gave the Commission the authority to waive or modify the

[1] The application for an RP principally requires that the applicant certify as to his or her familiarity with the rules relating to the type of station being operated.

operator requirement for broadcast stations.[2]

3. The Notice of Proposed Rule Making in MM Docket No. 94-130 ("Notice")[3] solicited comments on the desirability of such a waiver. Experience obtained from inspecting stations and technical literature suggested that in many cases modern monitoring and control equipment has rendered the need for a broadcast transmitter duty operator superfluous. Moreover, the Commission recognized that an applicant for an RP was not required to undergo any training relating to proposed duties or to demonstrate any technical knowledge pertaining to broadcast station operation. The Notice also discussed various rule amendments either ancillary to the waiver or otherwise necessary to update the rules in a manner more consistent with current technology. A list of parties filing comments and reply comments, as well as the acronyms used to designate them, is given in Appendix C.

DISCUSSION

Unattended operation.

4. With two exceptions, the commenters support waiver of Section 318 of the Act for broadcast stations to permit unattended operation. Some comments pointed out that when the current operator rules were adopted, transmitters were not as well developed as they are now and needed constant supervision; but modern transmitters are seen as suitable for unattended use because of their high reliability, superior design, the use of built-in protection circuits and the type of audio processing equipment employed.[4] There is general agreement that the technology exists to automate the monitoring and control of broadcast stations and that stations may be

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[2] The relevant portion of Section 318 formerly read as follows: "The actual operation of all transmitting apparatus in any radio station for which a station license is required by this Act shall be carried on only by a person holding an operator's license issued hereunder, and no person shall operate any such apparatus in such station except under and in accordance with an operator's license issued to him by the Commission; Provided, however, That the Commission if it shall find that the public interest, convenience or necessity will be served thereby may waive or modify the foregoing provisions of this section for the operation of any station except (1) stations for which licensed operators are required by international agreement, (2) stations for which licensed operators are required for safety purposes, (3) **stations engaged in broadcasting**, and (4) stations operated as common carriers..." The Law deleted the expression "stations engaged in broadcasting" and made "stations operated as common carriers" the third and last class of station for which licensed operators are required.

[3] 10 FCC Rcd 509, 59 Fed. Reg. 64387, December 14, 1994.

[4] Comments of BEI (p. 2), KTRL, (p. 1) and NAB (p. 6).

better served with constant (automated) technical monitoring than with human attendance.[5] The waiver, it is argued, would permit licensees to make more effective use of resources by implementing the operating and maintenance policies most appropriate for their stations.[6] Money currently spent on operator expenses is seen as being better spent on other aspects of station operation, and unattended operation should be extended to all classes of broadcast stations under all circumstances.[7]

5. However, two commenters currently engaged in providing remote station monitoring and control services expressed opposition or reservations about the waiver proposal. Waiving the operator requirement was seen as not well thought out in that stations would be put on "auto-pilot with no one in charge."[8] The claim was made that this would result in "thousands of stations operating outside their licensed parameters for extended periods of time."[9] Concern was expressed that a certain segment of the broadcast industry would leave its broadcast stations unattended and uncontrolled in order to cut costs without regard to the potential for resulting interference. To remedy any such inclination, the Commission was urged to increase the fines and forfeitures against stations if they are operated without duty operators and cause undue interference.[10] The currently available remedy of employing a remote station monitoring and control service was seen as the preferred solution for stations wishing to minimize their operating costs.[11] But the more general view expressed in the comments was that most licensees exercise due diligence in the operation of their stations and this is not expected to change if unattended operation is permitted.[12]

6. An automatic transmission system ("ATS") consists of equipment interconnected with the transmitter and other broadcast system components so as to monitor and control the station.

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[5] Comments of S&S (p. 1), KTRZ (p. 1), WNCG-FM (p. 1) and WNPC-AM.

[6] Comments of the AFCCE (p. 2), KOLY (p. 1), WHRZ-FM (p. 1).

[7] Comments of BEI (p. 2) and NAB (p. 3).

[8] Comments of StationWatch (p. 7).

[9] Comments of StationWatch (p. 1).

[10] Comments of Moody Bible (p. 3). In its reply comments (pp. 5-6), NAB specially opposed Moody Bible's proposal for additional forfeitures, saying that it was based "on the wholly unfounded presumption that broadcasters, in general, will become irresponsible."

[11] StationWatch indicates that monitoring services cost about $275 per month, or less than seventy-five cents an hour (p. 7).

[12] Comments of Birch Bay (p. 1), Burk (p. 2), KIOW (p. 1), KTRZ (p. 1) and SBE (p. 2).

Under the current rules, if ATS equipment fails to keep the station operating within prescribed technical parameters, it is taken off the air. The equipment also notifies designated station personnel (usually by telephone) about any malfunction. Comments as to whether unattended operation should be contingent on the use of ATS equipment were divided largely along broadcast managerial and technical lines. Some broadcasters took the position that the use of ATS equipment should be optional.[13] A smaller market broadcaster, for example, indicated that the purchase of ATS equipment may be beyond its means.[14] Broadcast engineering groups and individuals (as well as some broadcasters) favored requiring the use of ATS or some other means of automated station measurement and control (sometimes referred to as "AMC" equipment) as a means of mitigating possible interference.[15] They asked that, if the Commission required ATS equipment for unattended operation, it should state exactly what operating parameters must be monitored and controlled.[16] The importance of having a competent on-call engineer available in the event of out-of-tolerance operation not correctable from a remote location was also stressed.[17]

7. The Commission, based upon its experience in enforcing broadcast rules, concurs with the majority opinion that waiver of Section 318 of the Act to permit unattended operation is not likely to result in an increase in operation outside the tolerances specified in the Rules or the station authorization and will not adversely affect the public interest. Significant technical malfunctions should quickly become obvious and we do not anticipate their continuance for significant periods of time. The waiver appears further justified for reasons of efficiency, in order that our broadcast licensees can best decide how to allocate resources to ensure compliance. Therefore, the rules relating to station operators will be eliminated or revised as proposed in the Notice so as to permit unattended broadcast station operation.

8. In the past, broadcasters have been able to come close to achieving unattended

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[13] Comments of BEI (p. 5), KIOW (p. 3), KM Communications (p. 3) and NAB (p. 10).

[14] Comments of Birch Bay (p. 2).

[15] Comments of AFCCE (p. 2), Cap Cities/ABC (p. 3), Equity One (p. 5), SBA (p. 4) and SBE (p. 4) and Cap Cities (p. 3).

[16] The comments were unanimous in stating that transmitter operating frequency is so stable that it does not need to be monitored. Several commenters argued that modulation need not be monitored. SBE recommended that the following parameters be monitored for the indicated type of station: (1) AM - operating power, mode of operation, time of operation, antenna monitor indications of base current ratios and phases, modulation, tower lighting (if required) and EAS alarm; (2) FM - operating power, modulation, tower lighting (if required) and EAS alarm; and, (3) TV - aural and visual power, aural and visual modulation, tower lighting (if required) and EAS alarm.

[17] Comments of Silver King (p. 2).

operation by employing ATS equipment and a remotely located duty operator, who in practice seldom needed to be contacted. That type of operation is of proven reliability. However, we recognize that ATS equipment can be expensive, particularly for the smaller broadcasters who stand to benefit the most from the reforms at issue in this proceeding. In fact, the record indicates that some ATS equipment currently in use only monitors transmitter power. The greatest potential for interference would seem to lie with those AM stations that operate with substantially different antenna patterns and power in the daytime and nighttime. But such a circumstance would not be due to any failure on the part of the transmitter, but failure in the mode switching apparatus used with the transmitter and antennas. Experience has shown that such devices operate with a very high degree of reliability. On balance, then, considering the technical comments and our interest in providing for the most flexible, cost-effective station operation possible, unattended operation will be permitted for the time being without requiring concomitant use of ATS equipment. If this decision results in an increase in technical violations in the future, the Commission may take appropriate responsive action, such as rescinding the waiver for individual station licensees.

Universal application.

9. The Notice questioned whether there are circumstances which do not lend themselves to unattended operation, such as AM stations without approved antenna sampling systems,[18] and international, experimental and broadcast auxiliary stations. Most of the commenters addressing this issue indicated that every type of station could be operated unattended, although some suggested the use of AMC equipment.[19] Monitoring mode changes at directional AM stations was not considered to be difficult, although two commenters favored precluding unattended operation at stations without approved antenna sampling systems, in order to provide further incentive for sampling system improvement.[20] This recommendation was disputed by others on the grounds that even some approved sampling systems are in defective condition due to poor maintenance. Reference was made to the fact that the chief operator (a position not at issue in this proceeding) is required to certify that whatever kind of sampling system is being used is

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[18] Sampling systems pick up the signal radiated by each antenna in a directional array, relaying them via coaxial cable to an antenna monitor which displays the signal phases and amplitudes necessary to demonstrate that the array is functioning properly. An "approved" antenna sampling system is one that meets the requirements of Section 73.68(a), which specifies certain necessary design characteristics, and has been informally recognized as such by the Commission. Sampling systems which do not meet the requirements of Section 73.68(a) may tend to be less stable and require more human intervention than approved systems. Stations may operate with sampling systems which have not been approved.

[19] Comments of AFCCE (p. 3), Herald (p. 2), Moody Bible (pp. 6-7) and SBE (pp. 6-7).

[20] Comments of AFCCE (p. 2) and SBE (p. 6).

operating properly.[21]

10. The comments indicate that there are no technical obstacles to the automation of any type of broadcast station. It is clear, for instance, that the maintenance of the antenna sampling system is much more important than whether the particular system has been formally approved. The Commission concurs with the comment that stations without approved sampling systems, because of licensees' adherence to appropriate maintenance procedures, may be just as stable as stations with approved sampling systems and would be more stable than a station with an approved sampling system that is inadequately maintained. Imposing new regulatory restraints upon licensees of such stations does not appear to serve any useful purpose.[22] In any event, the requirement remains that the antenna system must operate properly, regardless of the type of sampling system. Therefore, all types of standard broadcast (AM, FM and TV) stations, as well as international broadcast stations will be permitted to operate unattended. The same permission applies to low power TV ("LPTV") stations with locally-originated programming.

Unattended operation and the Emergency Alert System ("EAS").

11. The Notice sought comment on the effect any waiver of the attended operation requirement would have on licensee's responsibilities for monitoring Emergency Broadcast System ("EBS") alerts. We noted that EBS monitoring appears to require human intervention, and queried as to an appropriate relationship between unattended operation[23] and the institution of the new Emergency Alert System ("EAS"), which can be fully automated.

12. Several comments expressed the opinion that the current EBS cannot be reliably automated and that it would be appropriate to link unattended operation with implementation of

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[21] Comments of Flick (p. 2).

[22] For example, logging requirements were greatly reduced in 1983 for all broadcast stations except AM stations without approved sampling systems (see Section 73.1820(a)(2)). The logging requirement was retained for such stations largely as an inducement to upgrade their sampling systems. Currently, about 200 AM stations operate without approved sampling systems. It is evident that the licensees of those stations believe that their current sampling systems are adequate and that the cost of upgrading substantially outweighs the ongoing expense of making periodic logging entries. In view of the questionable value of withholding unattended operation from such stations and considering the sampling system maintenance observations made by Flick, the Commission concludes that new regulatory burdens should not be imposed on such stations.

[23] Unattended operation of a broadcast station is operation that does not involve humans in directly overseeing and controlling the transmitting apparatus. A station may be "unattended" even though persons are present for management, sales, programming and other duties.

the EAS.[24] The lack of an "end of message" tone in the EBS is cited as being a particular obstacle to its automation.[25] One commenter summed up the arguments linking unattended operation to EAS by describing such linkage as an excellent opportunity to encourage the rapid implementation of the EAS. The commenter believed that progressive broadcasters who take the lead in implementing the new system should be allowed to begin unattended operation as soon as their new EAS equipment is installed, to reward those who risk the time and expense of "debugging" the new alert system and to offer a strong incentive for licensees not to postpone their system upgrades to the last minute. This was seen as a no risk benefit to both the licensees and the public.[26] Comments from the broadcast industry, however, suggested that it may be possible to fully or partially automate the current EBS.[27]

13. As the comments indicate, the EBS was designed for human intervention. Specifically, it does not possess the technical means of indicating whether an EBS alert is national or local in origin, nor does it provide an indication of when the alert message has concluded. It presumes that someone at the broadcast station is standing by the EBS receiver and will make such determinations and initiate an appropriate response. Typically these duties are handled by a duty operator since that person will always be available whenever the station is broadcasting, unlike other station employees. Thus, the need to comply with EBS requirements and responsibilities clearly makes it more difficult to achieve unattended operation of a broadcast station.

14. The new EAS, on the other hand, is specifically designed for unattended operation and does not require human involvement. However, various concerns over the EAS technology have arisen in recent months which may delay the availability of EAS equipment. The Commission is reluctant to deny broadcast licensees the benefits intended in this proceeding because of uncertainty in the implementation date for the EAS.

15. The Commission believes it should afford licensees the maximum possible latitude in satisfying present EBS and future EAS responsibilities, having in mind the ingenuity that can often be brought to bear in resolving such problems. For example, some of our licensees have employed firms which monitor for national EBS alerts and can initiate the appropriate station response. It may be possible for such firms to be notified of locally originated EBS alerts and

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[24] Comments of AFCCE (p. 4), BEI (p. 7), BTI, (p. 3), Cap Cities/ABC (p. 4), Hallikainen (p. 8), SBE (p. 7) and Smith (p. 4).

[25] Comments of BTI (p. 3). The difficulty in automating the EBS is not in determining when an EBS alert has arrived, or when or how to insert it into station programming, but in determining when the alert message is over so that normal programming can be resumed.

[26] Comments of BEI (p. 7).

[27] Comments of NAB (p. 17); comments of CBA (p. 5) and Wagner (p. 6).

respond in an appropriate way based on guidance provided by the licensee. Licensees may also seek to automate EBS equipment to a greater or lesser degree which, with appropriate human involvement, will enable them to meet their EBS obligations.

16. Accordingly, the Commission has decided to permit unattended operation in advance of implementation of the EAS, provided that licensees implement an effective method of complying with current EBS requirements and responsibilities. This obligation is set forth in Section 73.1300 as shown in Appendix A. The Commission cautions licensees that the implementation of an informal method or methods of automating the EBS is not a substitute for implementation of the EAS. Finally, the Commission encourages licensees who currently participate in local EBS alerts to continue to do so through whatever means they may employ to partially or fully automate their EBS functions.

Maximum time period for non-compliance correction.

17. The Notice discussed various types of broadcast out-of-tolerance operation, their probable interference impact and the response time in which such malfunctions should be corrected.[28] While the objective of making the response time uniform was widely supported, commenters differed over the appropriate value. The proposal that drew the most attention was to replace the rather vague response time "immediate" with the specific time limit of three minutes currently used in connection with ATS-operated stations. Generally, the proposed three-minute response time was viewed as inappropriate, especially in the case of unattended stations.[29] However, a number of the comments supported retention of the three-minute response time in the case of malfunctions with severe interference potential[30] but with several hours permitted in

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[28] Notice, paragraphs 25-31.

[29] See comments of KIOW (p. 4) which suggested 7-10 minutes, SBA (p. 6) which suggested "at least three minutes," Wagner (p. 5) who suggested "five or ten minutes," Gentner (p. 3) who stated "This period, while workable, may be in some situations be of too short a duration", NPR (pp. 3-4) which recommended no limit if interference does not actually result but at least "several hours" in any case, and AFCCE (pp. 6-8) which recommended various time limits from three minutes to several weeks depending on the specific problem. Cap Cities/ABC expressed the opinion that the "proposed blanket three-minute rule is vague, unworkable and counterproductive." Moody Bible (p. 11) expressed support for the three-minute limit in the case of unattended stations, but argued that attended stations should be permitted up to 30 minutes. Other commenters expressed similarly diverse opinions.

[30] As an example of such conditions, AFCCE (comments, p. 6) suggested "If the power of the station is more than two times that authorized for the mode of operation, or where the modulation exceeds 150%." Failure of an AM station to effect a mode switch was also cited as being potentially severe but deserving some latitude (30 minutes) in terms of correction due to the time for propagation conditions to change. AFCCE (comments, p. 7) also challenged the preference

the case of lesser malfunctions.

18. For many years, the Commission has required licensees to react more or less immediately to transmission system malfunctions capable of causing interference. However, the requirement was largely based upon the fact that such a response time was, in fact, practical (rather than necessary), as transmitter duty operators were always in attendance. In the case of unattended stations, requiring a rapid response becomes impractical, if not impossible, as the commenters have noted. Further, while technical malfunctions do adversely affect telecommunications and must be corrected, comparatively few are so disruptive as to require immediate correction or immediate termination of broadcasting. Thus, the Commission agrees that a three-minute response time in the case of a technical malfunction is unrealistic. In cases requiring the attention of a competent technical person, even an hour may not afford sufficient time for a person to arrive on-site and diagnose and correct the particular problem. Moreover, the retention of the requirement for attended stations also appears unnecessary because instances of severe interference caused by broadcast stations are rare. Therefore, the Commission has concluded that a substantial relaxation in technical malfunction response time is warranted. Accordingly, the rules adopted will indicate a generally applicable response time of three hours. This limit will apply to both attended and unattended stations, because even in cases where a station is attended, the duty operator may not possess the technical expertise to resolve the more unusual types of technical malfunctions. Thus, some more experienced person may have to be consulted. However, because cases may arise in which the Commission identifies a broadcast station as the source of a harmonic or spurious product[31] or other type of problem causing harmful interference, the Commission will retain the requirement that a licensee be able to shut its station down immediately (i.e., within three minutes) upon request by our enforcement personnel. In summary, we believe that a general response time of three hours is appropriate to enable licensees to deal with problems that result in an incremental degradation of service; the three-minute rule enables the Commission and licensees properly to react to serious malfunctions causing harmful or catastrophic loss of telecommunications service.

Monitoring, measurement and calibration requirements.

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expressed in the Notice (paras. 28, 30 and 31) for relying on field strength monitoring points as the final arbiters of proper antenna array performance. Antenna sampling system monitor readings (which typically derive their signals from small loop antennas mounted on the main antenna towers) were seen as more reliable.

[31] A harmonic is an integer multiple of the operating frequency. A spurious product is any other undesired emission that might be generated by the transmitter. Typically, the power contained in harmonic or spurious frequencies is insignificant. Occasionally, however, due to some failure in the transmitter, such signals can become significant and potentially cause interference. The Commission has never required that such a failure be detectable by ATS or any other kind of equipment. Such a diagnosis requires human investigation.

19. Because the staff occasionally receives inquiries on what broadcast station technical parameters need to be monitored, the Notice suggested that, for all stations, transmitter power, modulation level and tower lighting status should be monitored at a minimum. Determining proper (daytime/nighttime) mode changes at directional AM stations also was suggested, as were readings (such as antenna relative phases and amplitudes) necessary to ensure proper antenna operation. The question was raised as to whether transmitter frequency should be included in the list of important operating parameters. Amendments to Sections 73.1350 and 73.1580 were proposed to state which parameters should be monitored and how the monitoring equipment should be calibrated and maintained.

20. The commenters addressing these issues unanimously expressed the belief that monitoring transmitter frequency was unnecessary.[32] Some commenters argued that station modulation need not be constantly monitored.[33] The Commission was urged to exempt all types of broadcast auxiliary stations (FM translators in particular) from the proposed monitoring requirements, as such stations are currently operating unattended and are exempt from making such measurements on an ongoing basis.[34] Several commenters complained that the proposed rules relating to parameter monitoring leave too much discretion to licensees and that more specific "benchmarks" (in terms of how often a particular measurement should be made) should be provided.[35] Others, however, saw the proposals as being too regulatory in nature and urged the Commission to adopt rules affording the greatest possible flexibility.[36] Specific objection was made to proposed Section 73.1580(b), which was viewed as imposing new and unneeded logging requirements.[37] Concern was also expressed about proposed Section 73.1350(c)(2), which was viewed as effectively tightening applicable tolerances by requiring licensees to take into consideration the tolerances of the measurement instruments.[38]

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[32] See, for example, the comments of AFCCE (p. 8), BEI (p. 2), KIOW (p. 5), BSL (p. 2) and NPR (p. 5).

[33] Comments of BSL (p. 1), Flick (p. 3), Gray (p. 2), KIOW (p. 5) and NPR (p. 5). The comments of BSL (a manufacturer of ATS and remote control equipment) are particularly significant, as they suggest that some ATS equipment currently in use does not monitor modulation.

[34] Comments of Moody Bible (p. 15).

[35] Comments of Moody Bible (p. 12), BSL (p. 2) and SBA (p. 12).

[36] Comments of NPR (p. 6), Flick (p. 3), KM Communications (p. 4) and Wagner (p. 4).

[37] Comments of NAB (p. 15) and Miller (p. 2).

[38] Comments of Hallikainen (p. 14) and Miller (p. 2).

21. The question of parameter monitoring was raised in the Notice in order to clarify what station parameters a licensee should be concerned about and have the requisite equipment to measure. The context of some of the comments suggests that this inquiry was perceived as relating to what parameters ATS or remote control equipment should be capable of measuring. That was not the intent. The current ATS and remote control rules do not specify what parameters must be monitored (in the case of ATS) or must be capable of being monitored (in the case of remote control). The Commission was simply trying to indicate what station operating parameters are considered the most important for particular classes of stations, and require that some means should be provided to measure those parameters as often as necessary, whether automatically, remotely, or directly, to ensure proper station operation. While the Commission understands the concern expressed by some station engineers that some percentage of licensees may not require the verification of various operating parameters at specific intervals, the Commission is reluctant to specify measurement intervals for various parameters. The flexibility provided by deregulation efforts over the years has not resulted in any increase in negligent operation. Therefore, the Commission believes that action taken in this proceeding should continue in the same spirit of providing the maximum possible flexibility.

22. Accordingly, the rules will be adopted as proposed so as to indicate the operating parameters requiring periodic licensee attention. However, our proposal to specifically require log entries of corrective actions will not be included. The intent of that proposal was simply to require that licensees maintain some minimal record of their transmission system measurement, adjustment and maintenance procedures. The Commission always reserves the right to question licensees found violating the technical rules in order to determine whether or not a good-faith effort has been made to comply with the rules. Whether a licensee's response to such an inquiry takes the form of the proposed log entry or as a reply to an interrogatory letter at the time of a perceived problem would not appear to be of such consequence as to require specification in the rules.

23. The intended effect of proposed Section 73.1350(c)(2) seems to have been misunderstood by the commenters. It was intended merely as a clarification of long-standing policy and not as a change in measurement procedure or as an effective change in operating tolerances. An example should suffice to illustrate the objective. Section 73.1560 requires that a station's power be maintained as near as practicable to the authorized value and may not be less than 90% nor more than 105% of the authorized value for AM and FM stations. Thus, for an AM station authorized 1,000 watts, the maximum permissible output power is 1,050 watts, which is the absolute limit. The proposed rule merely makes explicit the implicit requirement that the licensee be aware of the error inherent in the measurement instruments employed. Section 73.1215 requires that indicating instruments used at broadcast stations have an accuracy of 2%. The rule merely acknowledges reality in recognizing that the economical manufacture of perfectly accurate meters and other measurement devices is impossible. However, producing

measurement devices with an error rate not exceeding 2% is economical.[39] But even though such devices may not be perfect, they can be compared or calibrated against higher standard instruments so that their inherent inaccuracy may be known and taken into consideration.

24. For the example cited, the power would typically be calculated by taking the common point antenna impedance (for the purpose of the example, 50 ohms) and multiplying it by the square of the radio frequency ("RF") current. Thus, the correct RF current (assuming a perfect indication) would be 4.47 amperes for 1,000 watts and 4.58 amperes for 1,050 watts. All the proposed rule requires is that the licensee be familiar with how high or low relative to the true value a meter reads, so that the actual indication can be used to adjust the transmitter to the authorized limit. Thus, if a licensee had an RF ammeter with a full-scale reading of 5 amperes which indicated 1% below the true current value, the indicated error would be -0.05 ampere.[40] That would need to be subtracted from the ideal values in order to determine the true power. Thus, the indication for the authorized power would be 4.42 amperes (instead of the expected 4.47 amperes) and the licensee should be concerned about overpower operation if the indicated value goes above 4.53 amperes (which, in reality, reflects a true value of 4.58 amperes).

25. The example given above should demonstrate clearly that the proposed rule amendment does nothing to alter the practical application of specified parameter tolerances. However, it does serve to correct the erroneous idea that the Commission is only concerned with indicated, rather than actual, parameter values. Therefore, the proposed rule will be retained.

Antenna tower light monitoring.

26. The Notice suggested that antenna tower light monitoring could be automated (as part of configuring a station for unattended operation), and that such ongoing monitoring might provide for better aviation safety than the once-a-day check currently required by the rules as a minimal monitoring activity.[41] Many of the commenters agreed.[42] Others favored automated but non-continuous tower monitoring.[43] Apparently, some automated light monitoring systems

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[39] In many cases, meters and other measurement devices manufactured to meet a 2% specification may, in fact, be considerably more accurate, but such accuracy cannot be relied upon.

[40] Meter accuracies are usually expressed as a percentage of the maximum indicated reading.

[41] Section 17.47(a)(1).

[42] See, for example, the comments of AFCCE (p. 4), Birch Bay (p. 3), Harris (p. 2), Moody Bible (p. 10), NAB (p. 12) and SBE (p. 7).

[43] Comments of NAB (p. 12) which favored the use of either continuous or "on request" monitoring and KIOW (p. 4), which favored the latter approach.

currently in use can indicate a malfunction, but manual observation is often needed to identify which light is out.[44] There was some discussion as to who should be notified in the event of a light failure - the licensee, the FAA or both - but no consensus emerged.

27. Section 17.47 requires that a licensee with an antenna tower check the lights once a day, either directly or via a monitor, or use an automatic alarm system to signal any light failures. The Commission believes that this rule adequately addresses the operation of automatic tower light monitoring systems and that no addition to or amendment of it is necessary in the face of expanded use of such devices likely to result from action taken in this proceeding. The comments indicate the present availability of several types of antenna tower light monitors. Some such devices are currently permitted as an alternative to inspection by individuals. No evidence has been presented that such devices have been unreliable.

28. Currently, Section 17.48(a) requires that the licensee notify the Federal Aviation Administration ("FAA") of any extinguishment or improper functioning of any top steady burning light or any flashing obstruction light that cannot be repaired within 30 minutes of discovery. No sufficient justification was given for changing this rule. The Commission believes that licensees ought to be promptly notified of tower light failure by their monitoring equipment so as to be able to initiate prompt remedial action. However, equipment which notifies the licensee and the FAA simultaneously of tower lighting failures may be employed optionally.

29. The Commission notes that Section 73.1213(c) permits broadcast licensees sharing a common antenna tower to select a "designated licensee" with primary responsibility for painting and lighting maintenance. By inference the same licensee may be charged with notifying the FAA about lighting problems. Should that person fail to notify the FAA in the event of a lighting failure, however, the responsibility falls upon each of the other licensees sharing the tower, just as it does with regard to complying with other applicable regulations contained in Part 17. The Commission notes that this responsibility may be subject to change in the future, pending the outcome of WT Docket No. 95-5.[45]

Contact Person.

30. The Notice indicated that it might be useful for the Commission or other government agencies to be able to contact broadcast licensees promptly in the event of a station malfunction. It pointed out that a possible method of facilitating such a contact would be for each licensee to

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[44] Comments of Cap Cities/ABC (p. 4).

[45] "Streamlining the Commission's Antenna Structure Clearance Procedure and Revision of Part 17 of the Commission's Rules Concerning Construction, Marking and Lighting of Antenna Structures," 10 FCC Rcd 2771, 60 Fed. Reg. 8618, February 15, 1995.

provide the Commission with the name and telephone number of a contact point, as is currently required by Section 74.734(a)(4) of our rules for unattended operation of low power TV and TV translator stations and by Section 74.1234(a)(4) of the rules for unattended operation of FM translator and FM booster stations. In considering this possibility, the Commission recognized that there are over 13,000 AM, FM and TV broadcast stations and expressed concern that attempting to maintain such a master list could be unwieldy. Therefore, another possible alternative was suggested, which emulated Sections 74.765 and 74.1265 of the rules, which require that the telephone number and address of the licensee or the licensee's local representative must be posted at the station's transmitter site on the structure supporting the transmitting antenna. Those rules, which apply to low power TV, TV translator, TV booster, FM translator and FM booster stations, require the display to be visible to a person standing on the ground and maintained in legible condition. Lastly, the Commission asked whether informal procedures existed which would obviate the need for these more regulatory approaches.

31. Several commenters supported the concept of the Commission's maintaining a contact person database.[46] The suggestion was made that to avoid the need to frequently update such a database, multiple contact persons might be listed.[47] Another suggestion was that the Commission issue an annual computer-generated questionnaire to each licensee asking if the information on record was correct.[48] The observation was made that if such a database was applied to FM translators (but the comment is applicable to other types of broadcast auxiliary stations), the on-site posting requirements currently applicable to such stations ought to be eliminated.[49]

32. However, other commenters were less enthusiastic about the proposal, considering it an unnecessary expense and an undertaking that would be difficult to keep up to date.[50] Publication of station phone numbers in public telephone directories in conjunction with "voice mail" or simple telephone answering machines was seen as a possible substitute. These could be linked to a paging service that could reach a responsible person during off hours.[51] A less formal means of contacting station personnel would be to publish the 24-hour number of the master control room or the emergency number of the chief operator.[52] Another commenter expressed

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[46] Comments of AFCCE (p. 5), BEI (p. 7), Moody Bible (p. 9) and SBE (p. 8).

[47] Comments of NPR (p. 4) and SBE (p. 9).

[48] Comments of BSL (p. 2).

[49] Comments of Moody Bible (p. 10).

[50] Comments of StationWatch (p. 5) and Wagner (p. 7).

[51] Comments of Wagner (p. 7).

[52] Comments of BSL (p. 2).

security and practicality concerns about both the database proposal (which was seen as being possibly vulnerable to "hackers") and the idea of posting such information at the transmitter site (such sites are often not accessible without a means of access, and when they are, such information could result in abuse or harassment).[53]

33. The Commission concludes that the implementation of a contact person database is unnecessary and that no changes in the current rules appear warranted at this time. At the time of the Notice, such an idea was thought to have some promise, in that it might have added structure to long-standing informal procedures. However, after considering the comments, the Commission shares the concern expressed about licensees' diligence in maintaining such a database and believes that effectively resolving security concerns could involve effort and procedures that are likely to be cumbersome both for it and for licensees. Instead, the Commission will continue to rely on informal procedures used by its enforcement personnel in their respective districts, where the names and telephone numbers of persons responsible for various stations are maintained in a reasonably comprehensive way and have generally proved to be sufficient.

34. The comments in this proceeding present a mixed message as to the value of posting requirements. In many cases, numerous transmitters comprising a multi-radio service "antenna farm" are bounded by protective fences that would effectively preclude the public and FCC field personnel from getting close enough to read a sign displaying the desired information. There are cases, however, where transmitters are located in places somewhat separated from stations of other radio services and the posting requirement may assist in the identification of a transmission facility. Accordingly, in the absence of more definitive information, the Commission believes that no changes should be made in the current transmitter site posting requirements, which apply only to LPTV, TV translator and TV booster stations.[54]

Transmitter and antenna system adjustment.

35. The Notice proposed that broadcast transmission system adjustments should only be done by the chief operator or by some other technically competent person designated by the licensee. This proposal received some support[55] but one commenter also questioned the value of the chief operator.[56] The commenter noted that the chief operator (like the duty operator) only need hold the RP and is not required to have any special training or skill, thus rendering the position meaningless. Reference was also made to the fact that the licensee has the primary

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[53] Comments of Cap Cities/ABC (p. 4).

[54] See Section 74.765(c).

[55] Comments of AFCCE (p. 9).

[56] Comments of SBA (p. 8).

responsibility for the operation of the station, not the chief operator. Another commenter noted having seen "broadcast transmitters adjusted by local TV repairmen because the bill was lower than employing a competent broadcast, or even a two-way, technician versed in adjusting transmitters."[57] The need for a competent on-call operator in the event of a station malfunction was stressed.

36. While chief operators will no longer be required to hold any type of license or permit issued by the Commission, such personnel are responsible for the proper operation of broadcast stations and are expected to be technically competent for the task. Eliminating such a position would appear to go outside the scope of this proceeding, which has been oriented largely toward the roles of licensed duty operators. However, after reviewing the current and proposed regulations regarding technical personnel, the Commission has concluded that proposed Section 73.1350(b) is somewhat duplicative of Section 73.1870 (which requires the designation of a chief operator). Therefore, the proposed rule will not be adopted.

Permissible methods for remote transmitter control

37. Also emphasized in the Notice was the need for licensees to have prompt access to metering and control of their transmitters, particularly the ability to turn the transmitter off in the event of a malfunction. The Commission proposed to permit a three minute delay in achieving such control, regardless of the kind of control circuit utilized. This question was raised largely due to uncertainty in the past over the reliability of non-dedicated, switched telephone circuits (such as those used for ordinary voice communication).

38. One commenter argued that permitting the use of the public switched telephone network ("PSTN") for transmitter control purposes was too lenient, as even when such a system is still functional after a disaster, it is likely to be clogged with calls made to verify the safety of various relatives and friends.[58] The Commission was said to be "naive to think that a vague requirement for an 'alternate method' will ensure fail-safe control."[59]

39. Other commenters, however, disagreed.[60] PSTN circuits were described as being "sufficient" to "extremely reliable" by others and it was argued that dedicated circuits were just as likely to fail as switched circuits and may not be restored as quickly as the latter by the local telephone company.[61] The Commission was encouraged to permit the use of non-dedicated

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[57] Comments of Flick (p. 4).

[58] Comments of SBE (p. 11).

[59] Id.

[60] Comments of Burk (p. 4), Hallikainen (p. 15) and NAB (p. 15).

[61] Comments of CBA (p. 3). General support for the use of switched circuits was also

(switched) lines where the use does not exceed 10% during the nighttime hours from 6 PM to 6 AM.[62] The inclusion of a "full time ON/OFF" connection requirement was said to be an unnecessary burden not justified by experience.[63]

40. The Commission agrees with those in favor of relying on the PSTN for transmitter control. There is no doubt that the reliability of the PSTN is very high, and evidence that dedicated leased lines receive higher priority from the local telephone companies has not been provided. Moreover, the Commission is not persuaded by the arguments that dedicated switched lines should be used for purposes other than transmitter control, even if such use is expected to be small. It is impossible to predict when ATS/AMC equipment may need to contact a responsible person, or to know when designated supervisory personnel may want to call the transmitter site to ascertain the status of the equipment. Therefore, the rules will be amended to permit the use of a dedicated, switched telephone line (or number) for transmitter control purposes, in lieu of a dedicated, continual use leased line.

Radiotelephone Operator Permit ("RP").

41. The Notice questioned whether in cases where licensees elect to continue attended station operation, duty operators should continue to be required to hold the RP. The comments were nearly unanimous in expressing the opinion that the RP serves no useful purpose and represents an unnecessary expense.[64] Several commenters noted that the station licensee is the one responsible for a station's proper operation, not the holder of an RP. However, one commenter expressed the belief that requiring an operator license, even if only with the minimal requirements necessary to obtain the RP, would encourage a greater sense of responsibility, remove doubts that training for such duties is necessary and provide a means to prevent recurrent violators from operating broadcast stations.[65] Another commenter reiterated the last-mentioned point, indicating that while the RP is a card that requires no knowledge to obtain, it does at least hold people accountable to the FCC for their actions. They can be fined for their infractions and in cases of gross neglect, lose the permit.[66]

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indicated by AFCCE (p. 9), BEI (p. 8) and KIOW (p. 5).

[62] Comments of KIOW (p. 5).

[63] Comments of BEI (p. 8).

[64] Comments of AFCCE (p. 5), Anderson (p. 3), Burk (p. 1), Smith (p. 2), Flick (p. 2), Equity One (p. 3), Hallikainen (p. 9), Ham (p. 3), Moody Bible (p. 9), NAB (p. 8), NPR (p. 2), SBA (p. 7) and SBE (p. 7-8).

[65] Comments of AMPERS (p. 1). AMPERS also expressed the belief that the $35 fee required to obtain the RP would screen out some who are not really serious about broadcasting.

[66] Comments of StationWatch (pp. 5-6).

42. The Commission is unpersuaded that the $35 cost of an RP and its potential for revocation constitute much of an incentive to operate a station responsibly. The vast majority of the commenters expressed the opinion that the RP is completely useless. While the fee covers processing costs, it is, in and of itself, no indicator of the value of the permit. As an incentive for responsible operation, possession of the RP would appear to be less effective than the damage to or severance of an employment relationship that should be expected in cases of negligent operation.

43. But the fact that broadcast licensees are held primarily responsible for the operation of their stations is the best argument for the elimination of the RP. We believe that most licensees do attempt to procure competent technical personnel and that having the RP is viewed as irrelevant to that process. Many advertisements for technical positions include the requirement that applicants hold the older and more meaningful General Radiotelephone Operator License and/or appropriate certification of competence from a broadcast-related engineering society. The latter are particularly suitable for establishing the competency of applicants for broadcast technical and engineering positions. Therefore, the rules are being amended to delete the requirement that a station operator possess the RP.

Other rule changes recommended in the comments

44. Several commenters recommended changes to rules either not discussed in the Notice or not included in its Appendix. In some cases, the rules were not included in the Appendix due to oversight, but are logical outgrowths of this proceeding or are clerical in nature.[67] Concern was expressed about the proposed elimination of Section 73.62(b), which relates to AM station operation during inclement weather. Still other rule changes were suggested that go beyond the scope of this proceeding. These included revision of Section 73.45 to eliminate the requirement of notifying the Commission about changes in antenna resistance, common point impedance and the use of direct reading power meters,[68] revision of Section 73.1560(a)(1) and (b) to increase the upper power limit of AM and FM stations from 5% to 10% of the value authorized[69] and deletion of Section 73.1570(a) which relates to minimum modulation.[70] The recommendation also was made that the main studio rules be abolished so that stations could be operated as unattended

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[67] See comments of Osenkowsky (p. 3) concerning Section 73.757(b), which requires that a licensed operator be in control whenever auxiliary transmitters are placed in operation, and Section 73.1230(c), which concerns the posting of operator licenses.

[68] Comments of Osenkowsky (p. 4).

[69] Ibid. This change is recommended solely for the benefit of older transmitters without an automatic power control function.

[70] Comments of Harris (p. 1).

"repeaters," provided that toll-free access to the station is provided by the licensee. The argument was made that maintaining and manning a main studio is a cost beyond the reach of some licensees, especially in the AM service. The flexibility to operate a network of local stations from a central location is seen as providing a community service not otherwise available, additional employment and tax revenue and enabling local advertisers affordable access to the community.[71]

45. Amendment of Sections 73.757 (which requires that a licensed operator be present when an auxiliary transmitter is placed in operation) and 73.1230 (which concerns the posting of operator licenses) will be made as requested, as they were omitted in the Notice due to oversight, are editorial in nature and are clearly within the scope of this proceeding. Further, the Commission agrees that omission of the substance of current Section 73.62(b) in the proposed revision constitutes an omission that unnecessarily reduces current operational flexibility. Therefore, Section 73.62 as adopted herein will retain the former flexibility concerning operation during inclement weather.

46. The suggested amendment of Section 73.45 may be worthwhile, but as no other parties commented on the proposal in reply comments, the Commission believes that the amendment should be deferred for the present. Furthermore, the subject is expected to be discussed in another rulemaking proceeding.[72] The recommended increase in power tolerance for AM and FM stations appears to be unnecessary, as the Commission has no complaints on record that the current tolerance is too stringent. Moreover, no reply comments supported the suggestion. The comment regarding main studio location is outside the scope of this proceeding, as more than simply technical factors would be at issue, and they would require further analysis in a more appropriate forum. Therefore, the Commission concludes that no revision to Sections 73.45, 73.1125, 73.1560 and 73.1570(a) will be made at this time.

ADMINISTRATIVE MATTERS

47. A Final Regulatory Flexibility Analysis is set forth in Appendix B.

ORDERING CLAUSE

48. Therefore, IT IS ORDERED THAT, pursuant to Sections 4(i) and 303(r) of the Communications Act of 1934, as amended, effective **[30 days after publication in the Federal Register]**, Parts 73 and 74 of the Commission' Rules and Regulations ARE AMENDED as set

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[71] Comments of Osenkowsky (p. 6).

[72] Notice of Proposed Rule Making in MM Docket No. 93-177 (An Inquiry into Commission Policies and Rules Regarding AM Radio Service Directional Antenna Performance Verification) 8 FCC Rcd 4345, (1993).

forth in Appendix A. IT IS FURTHER ORDERED THAT THIS PROCEEDING IS TERMINATED.

49. Further information on this matter may be obtained from James E. McNally, Jr., Engineering Policy Branch, (202) 776-1671.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

APPENDIX A

Parts 73 and 74 of Title 47 of the Code of Federal Regulations are amended as follows:

PART 73 - RADIO BROADCAST SERVICES

1. The authority citation for Part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303, 334.

2. Section 73.53 is amended by revising paragraph (b)(9) to read as follows:

§73.53 Requirements for authorization of antenna monitors.

* * * * *

(b) * * *

(9) The monitor, if intended for use by stations operating directional antenna systems by remote control, shall be designed so that the switching functions required by paragraph (b)(7) of this section may be performed from a point external to the monitor, and phase and amplitude indications be provided by external meters. The indications of external meters furnished by the manufacturer shall meet the specifications for accuracy and repeatability of the monitor itself, and the connection of these meters to the monitor, or of other indicating instruments with electrical characteristics meeting the specifications of the monitor manufacturer shall not affect adversely the performance of the monitor in any respect.

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3. Section 73.57 is amended by revising paragraph (d) to read as follows:

§73.57 Remote reading antenna and common point ammeters.

* * * * *

(d) Each remote reading ammeter shall be accurate to within 2 percent of the value read on its corresponding regular ammeter.

* * * * *

4. Section 73.62 is amended by revising paragraphs (b) and (c) to read as follows:

§73.62 Directional antenna system tolerances.

* * * * *

(b) Whenever the operating parameters of a directional antenna cannot be maintained within the tolerances specified in paragraph (a) of this section, the following procedures will apply:

(1) The licensee shall measure and log every monitoring point at least once for each mode of directional operation. Subsequent variations in operating parameters will require the remeasuring and logging of every monitoring point to assure that the authorized monitoring point limits are not being exceeded.

(2) Provided each monitoring point is within its specified limit, operation may continue for a period up to 30 days before a request for Special Temporary Authority (STA) must be filed, pursuant to paragraph (b)(4) of this section, to operate with parameters at variance from the provisions of paragraph (a) of this section.

(3) If any monitoring point exceeds its specified limit, the licensee must either terminate operation within 3 hours or reduce power in accordance with the applicable provisions of §73.1350(d), in order to eliminate any possibility of interference or excessive radiation in any direction.

(4) If operation pursuant to paragraph (b)(3) of this section is necessary, or before the 30 day period specified in paragraph (b)(2) of this section expires, the licensee must request a Special Temporary Authority (STA) in accordance with §73.1635 to continue operation with parameters at variance and/or with reduced power along with a statement certifying that all monitoring points will be continuously maintained within their specified limits.

(5) The licensee will be permitted 24 hours to accomplish the actions specified in paragraph (b)(1) of this section; provided that, the date and time of the failure to maintain proper operating parameters has been recorded in the station log.

(c) In any other situation in which it might reasonably be anticipated that the operating parameters might vary out of tolerance (such as planned array repairs or adjustment and proofing procedures), the licensee shall, before such activity is undertaken, obtain an STA in accordance with §73.1635 in order to operate with parameters at variance and/or with reduced power as required to maintain all monitoring points within their specified limits.

5. Section 73.69 is amended by revising paragraphs (a)(1) and (a)(2) to read as follows:

§73.69 Antenna monitors.

(a) * * *

(1) Normally, the antenna monitor is to be installed immediately adjacent to the transmitter and antenna phasing equipment. However, the monitor may be located elsewhere provided that its environment is maintained at all times within those limits under which the monitor was type-approved.

(2) The antenna monitor installed at a station operating a directional antenna by remote control or when the monitor is installed in the antenna field at a distance from the transmitter, must be designed and authorized for such use in accordance with the provisions of §73.53(b)(9).

* * * * *

6. Section 73.691 is revised to read as follows:

§73.691 Visual modulation monitoring.

(a) Each TV station must have measuring equipment for determining that the transmitted visual signal conforms to the provisions of this subpart. The licensee shall decide the monitoring and measurement methods or procedures for indicating and controlling the visual signal.

(b) In the event technical problems make it impossible to operate in accordance with the timing and carrier level tolerance requirements of §73.682 (a)(9)(i), (a)(9)(ii), (a)(12), (a)(13), and (a)(17), a TV broadcast station may operate at variance for a period of not more than 30 days without specific authority from the FCC; provided that, the date and time of the initial out-of-tolerance condition has been entered in the station log. If the operation at variance will exceed 10 consecutive days, a notification must be sent to the FCC in Washington, D.C., not later than the 10th day of such operation. In the event normal operation is resumed prior to the end of the 30 day period, the licensee must notify the FCC upon restoration of normal operation. If causes beyond the control of the licensee prevent restoration of normal operation within 30 days, a written request must be made to the FCC in Washington, D.C., no later than the 30th day for such additional time as may be necessary.

7. Section 73.757 is revised by removing and reserving paragraph (b).

8. Section 73.764 is removed.

9. Section 73.1010 is revised by removing and reserving paragraph (c).

10. Section 73.1230 is revised to read as follows:

§73.1230 Posting of station license.

(a) The station license and any other instrument of station authorization shall be posted in a conspicuous place and in such a manner that all terms are visible at the place the licensee considers to be the principal control point of the transmitter.

(b) Posting of the station license and any other instruments of authorization shall be done by affixing them to the wall at the posting location, or by enclosing them in a binder or folder which is retained at the posting location so that the documents will be readily available and easily accessible.

11. A new Section 73.1300 is added to read as follows:

§73.1300 Unattended station operation.

Broadcast stations may be operated as either attended (where a designated person is responsible for the proper operation of the transmitting apparatus either at the transmitter site, a remote control point or an ATS control point) or unattended (where highly stable equipment or automated monitoring of station operating parameters is employed). No prior FCC approval is required to operate a station in the unattended mode. Regardless of which method of station operation is employed, licensees must employ procedures which will ensure compliance with Part 11 of this chapter, the rules governing the Emergency Alert System (EAS).

12. A new Section 73.1350 is added to read as follows:

§73.1350 Transmission system operation.

(a) Each licensee is responsible for maintaining and operating its broadcast station in a manner which complies with the technical rules set forth elsewhere in this part and in accordance with the terms of the station authorization.

(b) The licensee must designate a chief operator in accordance with §73.1870. The licensee may designate one or more technically competent persons to adjust the transmitter operating parameters for compliance with the technical rules and the station authorization.

(1) Persons so authorized by the licensee may make such adjustments directly at the transmitter site or by using control equipment at an off-site location.

(2) The transmitter control personnel must have the capability to turn the transmitter off at all times. If the personnel are at a remote location, the control system must provide this

capability continuously or must include an alternate method of acquiring control that can satisfy the requirement of paragraph (d) of this section that operation be terminated within 3 minutes.

(c) The licensee must establish monitoring procedures and schedules for the station and the indicating instruments employed must comply with §73.1215.

(1) Monitoring procedures and schedules must enable the licensee to determine compliance with §73.1560 regarding operating power and AM station mode of operation, §73.1570 regarding modulation levels, and, where applicable, §73.1213 regarding antenna tower lighting, and §73.69 regarding the parameters of an AM directional antenna system.

(2) Monitoring equipment must be periodically calibrated so as to provide reliable indications of transmitter operating parameters with a known degree of accuracy. Errors inherent in monitoring equipment and the calibration procedure must be taken into account when adjusting operating parameters to ensure that the limits imposed by the technical rules and the station authorization are not exceeded.

(d) In the event that a broadcast station is operating in a manner that is not in compliance with the technical rules set forth elsewhere in this Part or the terms of the station authorization, and the condition is not listed in paragraph (e) of this section, broadcast operation must be terminated within three hours.

(1) Examples of conditions that require termination of operation include excessive power or excessive modulation.

(2) Additional examples for AM stations are any mode of operation not specified by the station license for the pertinent time of day or hours of operation and any condition of antenna parameters or monitoring points out of the tolerances specified elsewhere in this part or by the station's instrument of authorization. For these conditions, operation must be terminated within three minutes unless antenna input power is reduced sufficiently to eliminate any excess radiation.

(3) For AM stations using directional arrays, additional procedures apply when array operating parameters are at variance, monitoring points exceed specified limits, or authorized directional mode capability is lost. See §§73.62, Directional antenna system tolerances; 73.158, Directional antenna monitoring points; and 73.1680(b), Emergency antennas.

(e) If a broadcast station is operating in a manner that is not in compliance with one of the following technical rules, operation may continue if the station complies with relevant alternative provisions in the specified rule section.

(1) AM directional antenna system tolerances, see §73.62;

(2) AM directional antenna monitoring points, see §73.158;

(3) TV visual waveform, see §73.691(b).

(4) Reduced power operation, see §73.1560(d);

(5) Reduced modulation level, see §73.1570(a);

(6) Emergency antennas, see §73.1680.

(f) The transmission system must be maintained and inspected in accordance with §73.1580.

(g) Whenever a transmission system control point is established at a location other than at the main studio or transmitter, notification of that location must be sent to the FCC in Washington, D.C. within 3 days of the initial use of that point. This notification is not required if responsible station personnel can be contacted at the transmitter or studio site during hours of operation.

(h) The licensee must ensure that the station is operated in compliance with Part 11 of this chapter, the rules governing the Emergency Alert System (EAS).

13. Section 73.1400 is revised to read as follows:

§73.1400 Transmission system monitoring and control.

The licensee of an AM, FM or TV station is responsible for assuring that at all times the station operates within tolerances specified by applicable technical rules contained in this Part and in accordance with the terms of the station authorization. Any method of complying with applicable tolerances is permissible. The following are typical methods of transmission system operation:

(a) Attended Operation: Attended operation consists of ongoing supervision of the transmission facilities by a station employee or other person designated by the licensee. Such supervision may be accomplished by either:

(1) Direct supervision and control of transmission system parameters by a person at the transmitter site; or,

(2) Remote control of the transmission system by a person at the main studio or other location. The remote control system must provide sufficient transmission system monitoring and control capability so as to ensure compliance with §73.1350.

(3) A station may also be monitored and controlled by an automatic transmission system (ATS) that is configured to contact a person designated by the licensee in the event of a technical malfunction. An automatic transmission system consists of monitoring devices, control and alarm circuitry, arranged so that they interact automatically to operate the station's transmitter and maintain technical parameters within licensed values.

(4) A hybrid system containing some remote control and some ATS features is also permissible.

(5) In the case of remote control or ATS operation, not every station parameter need be monitored or controlled if the licensee has good reason to believe that its stability is so great that its monitoring and control are unnecessary.

(b) Unattended operation: Unattended operation is either the absence of human supervision or the substitution of automated supervision of a station's transmission system for human supervision. In the former case, equipment is employed which is expected to operate within assigned tolerances for extended periods of time. The latter consists of the use of a self-monitoring or ATS-monitored and controlled transmission system that, in lieu of contacting a person designated by the licensee, automatically takes the station off the air within three hours of any technical malfunction which is capable of causing interference.

14. Sections 73.1410, 73.1500 and 73.1550 are removed.

15. Section 73.1580 is revised to read as follows:

§73.1580 Transmission system inspections.

Each AM, FM, and TV station licensee or permittee must conduct periodic complete inspections of the transmitting system and all required monitors to ensure proper station operation.

16. Section 73.1635 is amended by revising paragraph (a)(5) to read as follows:

§73.1635 Special temporary authorizations (STA).

(a) * * *

(5) Certain rules specify special considerations and procedures in situations requiring an STA or permit temporary operation at variance without prior authorization from the FCC when notification is filed as prescribed in the particular rules. See §73.62, Directional antenna system tolerances; §73.157, Antenna testing during daytime; §73.158, Directional antenna monitoring points; §73.691, Visual modulation monitoring; §73.1250, Broadcasting emergency information; §73.1350, Transmission system operation; §73.1560, Operating power and mode tolerances; §73.1570, Modulation levels: AM, FM, and TV aural; §73.1615, Operation during modification of facilities; §73.1680, Emergency antennas; and §73.1740, Minimum operating schedule.

* * * * *

17. Section 73.1820 is amended by revising paragraphs (a) introductory text (a)(2)(iii), by removing paragraphs (b)(4), (b)(5) and (b)(6), redesignating paragraphs (b)(7) and (b)(8) as paragraphs (b)(4) and (b)(5), respectively and revising newly designated paragraph (b)(4) to read as follows:

§73.1820 Station log.

(a) Entries must be made in the station log either manually by a person designated by the licensee who is in actual charge of the transmitting apparatus, or by automatic devices meeting the requirements of paragraph (b) of this section. Indications of operating parameters that are required to be logged must be logged prior to any adjustment of the equipment. Where adjustments are made to restore parameters to their proper operating values, the corrected indications must be logged and accompanied, if any parameter deviation was beyond a prescribed tolerance, by a notation describing the nature of the corrective action. Indications of all parameters whose values are affected by the modulation of the carrier must be read without modulation. The actual time of observation must be included in each log entry. The following information must be entered:

* * * * *

(2) * * *

(iii) Entries of the results of calibration of automatic logging devices (see paragraph (b) of this section) or indicating instruments (see §73.67), whenever performed.

(b) * * *

(4) In the event of failure or malfunctioning of the automatic equipment, the person designated by the licensee as being responsible for the log shall make the required entries in the log manually at that time.

* * * * *

18. Section 73.1860 is removed.

19. Section 73.1870 is amended by revising paragraphs (a) and (b)(3) to read as follows:

§73.1870 Chief operators.

(a) The licensee of each AM, FM, or TV broadcast station must designate a person to serve as the station's chief operator. At times when the chief operator is unavailable or unable to act (e.g., vacations, sickness), the licensee shall designate another person as the acting chief operator on a temporary basis.

(b) * * *

(3) The designation of the chief operator must be in writing with a copy of the designation posted with the station license. Agreements with chief operators serving on a contract basis must be in writing with a copy kept in the station files.

* * * * *

PART 74 - EXPERIMENTAL, AUXILIARY, AND SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES

20. The authority citation for Part 74 continues to read as follows:

Authority: Secs. 4, 303, 48 Stat. 1066, as amended, 1082, as amended; 47 U.S.C. 154, 303, 554.

21. Section 74.5 is amended by removing and reserving paragraph (c).

22. Section 74.18 is revised to read as follows:

§74.18 Transmitter control and operation.

Except where unattended operation is specifically permitted, the licensee of each station authorized under the provisions of this part shall designate a person or persons to activate and control its transmitter. At the discretion of the station licensee, persons so designated may be employed for other duties and for operation of other transmitting stations if such other duties will not interfere with the proper operation of the station transmission systems.

23. Section 74.165 is revised to read as follows:

§74.165 Posting of station license.

The instrument of authorization or a clearly legible photocopy thereof shall be available at the transmitter site.

24. Section 74.432 is amended by revising paragraph (e)(1) to read as follows:

§74.432 Licensing requirements and procedures.

* * * * *

(e) * * *

(1) The station must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

* * * * *

25. Section 74.434 is amended by revising paragraph (b) to read as follows:

§74.434 Remote control operation.

* * * * *

(b) A remote control system must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

* * * * *

26. Section 74.436 is amended by revising paragraph (a) to read as follows:

§74.436 Special requirements for automatic relay stations.

(a) An automatic relay station must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

* * * * *

27. Section 74.533 is amended by revising paragraph (a)(2) to read as follows:

§74.533 Remote control and unattended operation.

(a) * * *

(2) The remote control system must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

* * * * *

28. Section 74.564 is amended by revising the heading and paragraph (a) to read as follows:

§74.564 Posting of station license.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted in the room in which the transmitter is located, provided that if the station is operated by remote control pursuant to §74.533, the station license shall be posted at the operating position.

* * * * *

29. Section 74.634 is amended by revising paragraph (a)(1) to read as follows:

§74.634 Remote control operation.

(a) * * *

(1) The remote control system must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

* * * * *

30. Section 74.703 is amended by revising paragraph (c) to read as follows:

§74.703 Interference.

* * * * *

(c) It shall be the responsibility of the licensee of a low power TV, TV translator, or TV booster station to correct any condition of interference which results from the radiation of radio frequency energy outside its assigned channel. Upon notice by the Commission to the station licensee that such interference is caused by spurious emissions of the station, operation of the station shall be suspended within three minutes and not resumed until the interference has been eliminated. However, short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

* * * * *

31. Section 74.734 is amended by revising paragraph (a) introductory text and removing paragraph (a)(6) to read as follows:

§74.734 Attended and Unattended operation.

(a) Low power TV, TV translator, and TV booster stations may be operated without a designated person in attendance if the following requirements are met:

* * * * *

32. Section 74.750 is amended by revising paragraph (g) to read as follows:

§74.750 Transmission system facilities.

* * * * *

(g) Low power TV, TV translator, or TV booster stations installing new type accepted transmitting apparatus incorporating modulating equipment need not make equipment performance measurements and shall so indicate on the station license application. Stations adding new or replacing modulating equipment in existing low power TV, TV translator, or TV booster station transmitting apparatus must have a qualified person examine the transmitting system after installation. This person must certify in the application for the station license that the transmitting equipment meets the requirements of paragraph (d)(1) of this section. A report of the methods, measurements, and results must be kept in the station records. However, stations installing modulating equipment solely for the limited local origination of signals permitted by §74.731 need not comply with the requirements of this paragraph.

33. Section 74.765 is amended by removing paragraph (b) and redesignating paragraph (c) as paragraph (b), respectively.

34. Section 74.769 is revised to read as follows:

§74.769 Copies of rules.

The licensee or permittee of a station authorized under this subpart shall have a current copy of Volume I and Volume III of the Commission's Rules. Each such licensee or permittee shall be familiar with those rules relating to stations authorized under this subpart. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

35. Section 74.901 is amended by revising the definitions for attended operation, remote control and unattended operation to read as follows:

§74.901 Definitions.

Attended operation. Operation of a station by a designated person on duty at the place where the transmitting apparatus is located with the transmitter in the person's plain view.

* * * * *

Remote control. Operation of a station by a designated person at a control position from which the transmitter is not visible but where suitable control and telemetering circuits are provided which allow the performance of the essential functions that could be performed at the transmitter.

* * * * *

Unattended operation. Operation of a station by automatic means whereby the transmitter is turned on and off and performs its functions without attention by a designated person.

36. Section 74.939 is amended by revising paragraph (i) to read as follows:

§74.939 Special rules governing ITFS response stations.

* * * * *

(i) The transmitter of an ITFS response station may be operated unattended. The overall performance of the ITFS response station transmitter shall be checked as often as necessary to ensure that it is functioning in accordance with the requirements of the Commission's rules. The

licensee of an ITFS response station is responsible for the proper operation of the transmitter at all times. The transmitter shall be installed and protected in such manner as to prevent tampering or operation by unauthorized persons.

* * * * *

37. Section 74.969 is revised to read as follows:

§74.969 Copies of rules.

The licensee of an instructional television fixed station shall have a current copy of Parts 73 and 74 of the Commission's Rules. In cases where aeronautical hazard marking of antennas is required, such licensee shall also have a current copy of Part 17 of this chapter. Each licensee is expected to be familiar with the pertinent rules governing instructional television fixed stations.

38. Section 74.1203 is amended by revising paragraph (e) to read as follows:

§74.1203 Interference.

* * * * *

(e) It shall be the responsibility of the licensee of an FM translator or FM booster station to correct any condition of interference which results from the radiation of radio frequency energy by its equipment on any frequency outside the assigned channel. Upon notice by the Commission to the station licensee that such interference is being caused, the operation of the FM translator or FM booster station shall be suspended within three minutes and shall not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions by the FM translator or FM booster station; provided, however, that short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

39. Section 74.1234 is amended by revising paragraph (a) and removing paragraph (c) to read as follows:

§74.1234 Unattended operation.

(a) A station authorized under this subpart may be operated without a designated person in attendance if the following requirements are met:

* * * * *

APPENDIX B

Final Regulatory Flexibility Act Analysis

I. Reason for Action

A revision in the Communications Act of 1934 has given the Commission authority to waive the requirement that broadcast stations be operated by licensed transmitter duty operators. A waiver of this requirement would permit such stations to be operated unattended for the first time. This Report and Order specifies the conditions relating to such operation.

II. Objectives

The action taken herein is intended to update the rules to provide for unattended broadcast station operation and to clarify the technical responsibilities of broadcast licensees, particularly those operating unattended stations.

III. Legal Basis

The action taken is authorized by Sections 4(i) and (j), 302, 303 and 403 of the Communications Act of 1934, as amended.

IV. Description, Potential Impact and Number of Small Entities Affected

The action taken in this proceeding is expected to benefit smaller broadcast licensees by eliminating the need for a transmitter duty operator. This is expected to result in a significant operational cost savings. However, taking advantage of the flexibility provided by the proposed new rules is entirely optional. Licensees may continue to operate as they currently do if they so desire.

V. Recording, Record Keeping and Other Compliance Requirements

Comments directed toward the Initial Regulatory Flexibility Analysis contained in the Notice of Proposed Rule Making ("Notice") were filed by Ted Miller, who complained about new record-keeping and other requirements proposed in the Notice when the Initial Regulatory Flexibility Analysis indicated that there were none. Strictly speaking, Mr. Miller's assertions are correct. However, the Commission concludes that the new record-keeping requirements proposed in the Notice were insignificant compared to the many other deregulatory aspects of this proceeding. However, all of Mr. Miller's complaints and recommendations have been accommodated and are addressed either in the text of the attached Report and Order or in the rule appendix, so that there is in fact no adverse regulatory impact whatsoever on smaller broadcast licensees.

VI. Federal Rules which Overlap, Duplicate or Conflict with this Rule

None.

VII. Any Significant Alternative Minimizing Impact on Small Entities and Consistent with the Stated Objectives

None.

APPENDIX C

Parties filing comments in MM Docket No. 94-130:

Allison Associates (Allison)
Association of Minnesota Public Educational Radio Stations (AMPERS)
Anderson, Andy (Anderson)
Association of Federal Communications Consulting Engineers (AFCCE)
Baker, Vernon H. (Baker)
Batesville Broadcasting Co. (Batesville)
Bellingham Broadcasting (Bellingham)
Birch Bay Broadcasting Co. (Birch Bay)
Broadcast Electronics Inc. (BEI)
Broadcast Signal Lab (BSL)
Burk Technology Inc. (Burk)
Burrow, R. Morgan (Burrow)
Capital Cities/ABC Inc. (Cap Cities/ABC)
Equity One Media Partners (Equity One)
Flick, Curtis W. (Flick)
Gentner Communications Co. (Gentner)
Gray, James P. (Gray)
Hallikainen and Friends (Hallikainen)
Ham Broadcasting Co. (Ham)
Harris Corporation (Harris)
Herald Broadcasting (Herald)
KM Communications (KMC)
Liberty Temple Full Gospel Church Inc. (Liberty Temple)
Miller, Randal J. (R. Miller)
Miller, Theodore C. (T. Miller)
Moody Bible Institute of Chicago (Moody Bible)
National Association of Broadcasters (NAB)
National Public Radio (NPR)
Osenkowsky, Thomas Gary (Osenkowsky)
Platinum Broadcasting Inc. (PBI)
Reich, Raymond F. (StationWatch)
Rio Grande Bible Institute & Language School (KRIO-AM/KOIR-FM)
S&S Communications Group (S&S)
Silver King Communications (Silver King)
Society of Broadcast Engineers (SBE)
Soucise, Joseph R. (Soucise)
Smith, Thomas C. (Smith)
State Broadcasters Associations (SBA)
Taconite Broadcasting, Inc. (Taconite)

Tidewater Broadcasting (Tidewater)
Tradewater Broadcasting Co. (Tradewater)
Wagner, James P. (Wagner)
Wind River Communications (Wind River)
KIOW-FM
KOLY-AM/FM
KSUE [93 JDX]
KUGR/KYCS
WATS/WAVR
WGOG
WHYL-AM
WJLR-FM (Reising, Keith)
WNPC Inc. (WNPC)
WSWO
WVOW

Reply Comments were filed by:

Capital Cities/ABC Inc. (Cap Cities/ABC)
Community Broadcasters Association (CBA)
National Association of Broadcasters (NAB)