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

In the Matter of	)	
	)	
An Inquiry Into the Commission's Policies and	)	MM Docket No. 93-177
Rules Regarding AM Radio Service Directional	)	
Antenna Performance Verification	)	

THIRD REPORT AND ORDER AND SECOND ORDER ON RECONSIDERATION

Adopted: August 14, 2013 **Released: August 16, 2013**

By the Commission:

TABLE OF CONTENTS

Heading Paragraph #

I. INTRODUCTION

1. In this *Third Report and Order*, we further our initiative to simplify the Media Bureau's licensing procedures. This Order harmonizes and streamlines the Commission's rules regarding tower construction near AM stations in two respects. First, the Order establishes a single protection scheme for tower construction and modification near AM tower arrays. Second, the Order designates "moment method" computer modeling as the principal means of determining whether a nearby tower affects an AM radiation pattern. These actions take another step in the Commission's modernization by replacing time-consuming direct measurement procedures with an efficient computer modeling methodology that is reflective of current industry practice.

II. BACKGROUND

2. This proceeding is part of a longstanding effort to implement efficiencies in broadcast licensing procedures.[1] The *Report and Order* in this proceeding simplified traditional proof of performance requirements for directional AM stations.[2] The *Further Notice* sought comment on the use of moment method modeling as a more efficient substitute for traditional directional AM station field strength proofs, which can be time-consuming and expensive.[3] The *Second Report and Order* further reduced the regulatory burdens on AM broadcasters by permitting the use of moment method modeling to verify AM directional antenna performance.[4] The *Second Further Notice of Proposed Rulemaking* sought additional comment on whether to modify the rules regarding the obligation to protect AM stations from the effects of nearby tower construction and modification. It proposed to replace the current scheme, which is based on the service of the proposed tower user, with uniform rules that would apply to all services and to permit the use of moment method modeling to assess the effects of tower construction or modification near AM stations.[5]

III. THIRD REPORT AND ORDER

3. *Background.* In AM radio, the tower itself functions as the antenna. Consequently, a nearby tower may become an unintended part of the AM antenna system, reradiating the AM signal and distorting the authorized AM radiation pattern. Our rules contain several sections concerning tower construction near AM antennas that are intended to protect AM stations from the effects of such tower construction, specifically, Sections 73.1692, 22.371, and 27.63.[6] These existing rule sections impose differing requirements on the broadcast and wireless entities, although the issue is the same regardless of the types of antennas mounted on a tower. Other rule parts, such as Part 90 (Private Land Mobile Radio Services) and Part 24 (Personal Communications Services), entirely lack provisions for protecting AM stations from possible effects of nearby tower construction.

4. The Commission's longstanding "newcomer" policy mandates that a newcomer (i.e., a party constructing a new or modified facility) is responsible, financially or otherwise, for taking steps necessary to eliminate objectionable interference to existing stations.[7] This policy has been applied to a

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[1] *See, e.g., 1998 Biennial Regulatory Review – Streamlining of Mass Media Applications, Rules, and Processes*, Report and Order, 13 FCC Rcd 23056 (1998).

[2] *See An Inquiry Into the Commission's Policies and Rules Regarding AM Radio Service Directional Antenna Performance Verification*, Report and Order and Further Notice of Proposed Rule Making, 16 FCC Rcd 5635 (2001) *("Report and Order"* or *"Further Notice*"). An antenna proof of performance establishes whether the radiation pattern of an AM station is in compliance with the station's authorization. An AM station must perform a full proof to verify the pattern shape when a new directional antenna system is authorized. Partial proofs, which require fewer measurements, are occasionally necessary to show that an array continues to operate properly.

[3] *See Further Notice*, 16 FCC Rcd at 5637. Directional AM stations may use either moment method modeling or the traditional method based on field strength measurements to demonstrate that an AM antenna pattern is properly adjusted.

[4] *See An Inquiry Into the Commission's Policies and Rules Regarding AM Radio Service Directional Antenna Performance Verification*, Second Report and Order and Second Further Notice of Proposed Rule Making, 23 FCC Rcd 14267 (2008) *("Second Report and Order"* or *"Second Further Notice*").

[5] *See Second Further Notice*, 23 FCC Rcd at 14272.

[6] 47 C.F.R. §§ 73.1692, 22.371, and 27.63.

[7] The "newcomer" policy dates back to *Midnight Sun Broadcasting Co.*, Memorandum Opinion and Order, 11 FCC 1119 (1947), in which the Commission held a broadcaster responsible for resolving interference caused by its new facilities to other preexisting facilities in close proximity. The Commission does not require a specific rule or express condition on a construction permit to apply the newcomer policy. *See, e.g., Athens Broadcasting Co., Inc.*,

(continued….)

variety of services.[8] Despite this underlying remediation policy, the absence of explicit rules across all services with respect to tower construction near AM tower arrays[9] has led to confusion among tower proponents with respect to the proper procedures to protect nearby AM stations and, therefore, inconsistent protection to the affected AM stations.[10] Uniform rules for all services will mitigate confusion and ensure consistent protection to AM stations.

5. The *Second Further Notice* tentatively concluded that the issue of tower construction or modification near AM stations should be addressed by a single set of rules applying to all tower construction and sought comment on proposed new rules which would appear in Part 1 of the Commission's Rules.[11] The new rules are based on proposals by an *ad hoc* technical group of radio broadcasters, equipment manufacturers, and broadcast consulting engineers, acting collectively as the AM Directional Antenna Performance Verification Coalition ("Coalition"). The Coalition's members include 24 broadcast licensees, among them the largest group owners, and ten broadcast consulting firms. The Coalition's proposal to consolidate AM proximity rules was also supported by PCIA—the Wireless

(Continued from previous page)
Memorandum Opinion and Order, 68 FCC 2d 920 (1978) (requiring a newcomer AM radio permittee to remediate any damaging interference caused to a previously authorized CATV headend tower); *B&W Truck Service*, Letter, 15 FCC 2d 769 (1968) (ordering a Part 90 licensee to dismantle or detune its tower due to interference to a preexisting AM station); *Broadcast Corporation of Georgia*, Memorandum Opinion and Order, 91 FCC 2d 854 (1982) (finding that a new television station "as the 'newcomer' has the responsibility to implement effective measures to rectify the interference caused to other authorized and existing services by its operations" and bears the "burden of correcting the interference, financial and otherwise").

[8] *See, e.g., Amendment of Parts 2, 22 and 90 of the Commission's Rules*, Second Report and Order, 91 FCC 2d 1214, 1223 (1982) (noting the applicability of the newcomer interference policy to Part 90 stations and explaining "in resolving interference complaints, if cooperation does not work, we will require the 'last person-in' to correct the interference problem); *Amendment to Part 1, 21 and 74 of the Commission's Rules*, Report and Order on Reconsideration, 14 FCC Rcd 12764, 12781 (1999) (explaining that interference rights within MDS and ITFS services are based on a "first in time, first in right" philosophy); *Sudbrink Broadcasting of Georgia*, Memorandum Opinion and Order, 65 FCC 2d 691, 692 (1977) (clarifying that in interference disputes between two broadcast stations "[i]t is clear that the 'newcomer' is responsible, financially or otherwise, for taking whatever steps may be necessary to eliminate objectionable interference."); 47 C.F.R. § 74.703(d) ("When a low power TV or TV translator station causes interference to a CATV [cable] system ... the earlier user, whether cable system or low power TV or TV translator station, will be given priority on the channel, and the later user will be responsible for correction of the interference"); 47 C.F.R. § 101.105 (establishing interference protection criteria under which fixed microwave services must protect existing or previously applied for systems).

[9] As we discuss below, the Commission's rules contained some explicit but dissimilar requirements that certain licensees must follow to protect AM stations from the effects of nearby tower construction, whereas other licensees do not have to follow specific requirements to protect AM stations. *See infra*, note 68 and accompanying text.

[10] *See, e.g., Amendments to Part 73 and 74 of the Commission's Rules to Permit Certain Changes in Broadcast Facilities*, Report and Order, 12 FCC Rcd 12371, 12394-95 (adopting Section 73.1692 of the Rules and acknowledging the "inconsistent protection to AM radio stations by different services"); Comments of Crawford Broadcasting Company ("Crawford") at 1 (noting that "Part 22 and 27 licensees do a reasonably good job of protecting nearby AM antennas," but finding that "Part 90 and Part 15 licensees often construct or modify antenna structures close to AM antenna sites without making any notification").

[11] The existing rules (Sections 73.1692, 22.371, and 27.63) apply to all towers within the specified distances of an AM station; the rules are not restricted to towers requiring registration. Similarly, the Commission proposed new rules that would apply to the construction of all communications towers within specified parameters, not just towers requiring notice to the Federal Aviation Administration and tower registration under Part 17. Accordingly, the Commission proposed that any new rules adopted should appear in Part 1 of our Rules, not Part 17, as initially proposed by the Joint Commenters.

Infrastructure Association ("PCIA"), the Land Mobile Communications Council ("LMCC"), the Wireless Communications Association International, Inc. ("WCA"), and most commenters.

6. Existing Commission rules require licensees and permittees to notify AM stations and take appropriate action when a tower is constructed within a fixed distance of an AM station. In contrast, the *Second Further Notice* proposed to replace this approach with one that defines the critical distance from both nondirectional (single antenna) and directional (multiple antennas) AM stations based on the pertinent AM station's frequency and the proponent's tower height.[12] The proposed rules would require a party proposing to construct a new tower or significantly modify[13] an existing tower within the pertinent critical distance to provide notice to the AM station at least 30 days prior to the planned commencement of construction. Such party would be responsible for the installation and maintenance of any detuning apparatus necessary to restore the AM station's radiation pattern. The proposed rules would designate moment method modeling[14] as the principal means of determining whether a nearby tower affects an AM pattern. The rules would, however, allow traditional "partial proof" measurements[15] taken before and after tower construction as an alternative procedure when the potentially affected AM station was licensed pursuant to field strength measurements, as opposed to computer modeling. The proposed rules would eliminate short towers from consideration[16] and would exclude many routine cases in which antennas are added to existing towers. However, the proposed rules would permit an AM station to show that tower construction or modification not otherwise subject to these notice and remediation requirements had affected AM station operations and would authorize the Commission, if necessary, to direct a tower proponent[17] or owner to install and maintain any detuning apparatus[18] necessary to restore proper operation of the AM antenna.

7. Nearly all commenters support the proposed rules with minor revisions.[19] In joint comments, the Coalition, LMCC, and WCA ("Joint Commenters") state that the new rules "will clarify the proper procedures for ascertaining the impact of nearby construction activities on AM stations, and

[12] The critical distance for non-directional AM stations is one wavelength at the frequency of the AM station. The critical distance for directional AMs is any distance less than ten wavelengths of the frequency of the AM station up to a maximum distance of three kilometers, as specified in existing rules for certain wireless licensees.

[13] Section 1.30002(d) defines a significant modification as follows: "A significant modification of a tower in the immediate vicinity of an AM station is defined as follows: (1) any change that would alter the tower's physical height by 5 electrical degrees or more at the AM frequency; or (2) the addition or replacement of one or more antennas or transmission lines on a tower that has been detuned or base-insulated." *See* Appendix B hereto.

[14] Moment method modeling is a computer modeling technique that can be used to verify that an AM directional antenna performs as authorized.

[15] Partial proofs, which require fewer measurements than a full proof, are occasionally necessary to show that an AM array continues to operate properly. Partial proof of performance measurements, using the procedures described in Section 73.154 of the Commission's Rules, must be made whenever the licensee has reason to believe that the radiated field may be exceeding the limits for which the station was most recently authorized to operate.

[16] Short towers are subject to the current rules. *See* 47 C.F.R. §§ 73.1692, 22.371, and 27.63.

[17] As defined by our new rules, tower proponent refers to a "party proposing tower construction or significant modification of an existing tower or proposing installation of an antenna on an AM tower." *See* Appendix B (adopting new rule 47 C.F.R. § 1.30001(c)).

[18] A detuning apparatus is used to minimize reradiation of the AM signal, thus correcting distortion of the AM station's antenna pattern.

[19] *See, e.g.*, Comments of the National Association of Broadcasters ("NAB") at 2; Comments of Crawford at 1; Comments of Waterford Consultants, LLC (Waterford") at 2.

will reduce both the time and expense associated with performing that analysis."[20] The Joint Commenters suggest several minor changes to the proposed rules. PCIA also expresses substantial support for the proposed rules, stating that "with a few minor clarifications, the Commission's new process as consolidated in Part 1 of the Commission's Rules will provide helpful guidance for those involved with tower construction."[21] Greater Media, Inc., while supporting the concept of a consolidated set of rules, expresses reservations regarding the use of moment method analysis by tower owners or proponents of tower construction to assess the effects of a tower on directional AM stations licensed pursuant to a proof based on field strength measurements.[22] Greater Media proposes more substantial revisions to the proposed rules. We address these matters below.

8. *Discussion.* In the *Second Further Notice* the Commission requested comment on the proposal to adopt a uniform set of rules applicable to all services,[23] the use of moment method modeling to assess the effects of tower construction or modification near AM stations, as well as a number of issues that could establish limits on the scope of the new rules and the technical and/or policy grounds for such limits. Specifically, the Commission sought comment on: (1) the proposed exclusion of short towers and antenna structures mounted on buildings from AM proximity analysis; (2) the proper notification procedures to AM stations regarding nearby tower construction; (3) a rule provision to cover circumstances that would be otherwise excluded from the new rules;[24] (4) the structures subject to the new rules; and (5) the proposed application of the new rules to towers constructed or substantially modified after the rules' effective date.

9. *Threshold Heights and Exclusion of Building-Mounted Antennas.* The proposed rules excluded short towers from AM proximity analysis on the grounds that such towers are inefficient re-radiators that would not generally affect an AM pattern. Most commenters agree with the proposed threshold heights of 36 electrical degrees for a directional antenna and 60 electrical degrees for a non-directional antenna.[25] Two commenters, however, propose lower threshold heights. Greater Media urges the Commission to reduce the non-directional antenna threshold height from 60 to 36 electrical degrees and adopt a more stringent 1 decibel (dB) pattern distortion threshold.[26] Cohen, Dippell and Everist, P.C. ("CDE") recommends that a 20 degree electrical height be used in lieu of the 36 electrical degree height proposed for directional antennas.[27] These commenters, however, offer no analytical support for their alternative proposals. In contrast, our threshold height limits are premised on extensive staff modeling studies and modeling studies previously submitted by the Association of Federal Communications

[20] *See* Joint Comments of AM Performance Directional Antenna Performance Verification Coalition, the Land Mobile Communications Council, and the Wireless Communications Association International, Inc. ("Joint Comments") at (i).

[21] *See* Reply Comments of PCIA at 1.

[22] *See* Comments of Greater Media, Inc. ("Greater Media") at 4.

[23] *See* New Section 1.30000 of the Rules.

[24] For example, a short tower that would be otherwise excluded from study under the new rules could potentially affect the operation of an AM station if it is very close to the AM antenna. There may also be unusual circumstances in which tower construction outside the proposed distances may affect an AM pattern.

[25] *See, e.g.*, Joint Comments at 3; Comments of Crawford at 1.

[26] Comments of Greater Media at 2-3 (asserting that "it is well established in the industry that nondirectional structures in such close proximity to an antenna array can be very highly illuminated and thus have a high potential for significant rerediation").

[27] Comments of CDE at 2 (explaining that the "firm found it necessary to detune a structure who possessed an electrical height of about 25 degrees in a field of 100 mV/m").

Consulting Engineers.[28] The Commission's proposed 2 dB pattern distortion threshold, which was supported by the majority of commenters, is the criterion utilized in assessing the circularity of a nondirectional pattern in other broadcast services.[29] Accordingly, we adopt the 2 dB pattern distortion threshold and the threshold heights of 36 electrical degrees for a directional antenna and 60 electrical degrees for a non-directional antenna, and therefore, exclude shorter towers from consideration.

10. Similarly, the proposed rules excluded all antenna structures mounted on buildings from AM proximity analysis. The Joint Commenters, while agreeing in substance with the exclusion of building-mounted antennas, suggest a modification of the proposed rule. The Joint Commenters warn that, in some cases, buildings may support towers tall enough to be significant re-radiators at an AM frequency. According to the Joint Commenters, "[s]ignificant tower structures can be mounted on buildings, and [we] are aware of several instances where the height of a microwave or other type of tower actually exceeds the height of the building on which the tower is mounted."[30] Therefore, the Joint Commenters suggest that the new rules should apply to any tower that would increase "the overall physical height of a building by more than 10 electrical degrees."[31] We acknowledge the Joint Commenters' concern regarding taller towers atop buildings, and we agree that the proposed categorical exemption of all antennas mounted on buildings is overly broad, and therefore, could potentially expose AM stations to adverse pattern distortions. We believe, however, that the criterion of 10 electrical degrees is not a practical solution because: (1) it is difficult, if not infeasible, to predict and accurately measure re-radiation from a building; and (2) it is impossible to detune a building and similarly, impossible to detune the combination of a building and a tower. Accordingly, because it is not feasible to analyze the combined effects of the building and tower, we believe that it is more appropriate to consider the potential effects of a tower separately from any building on which it is mounted. We therefore revise the rule to exclude most antenna structures atop buildings, except where the antenna structure alone would be a significant re-radiator as defined in Section 1.30002(a) or (b).[32]

11. *Notification.* Commenters were divided on the provisions of the proposed rules requiring 30 days' prior notice of tower construction, including significant tower modifications, to a nearby AM station.[33] Greater Media considers the proposed 30-day notice period too short, advocating instead for a 120-day notice period.[34] PCIA prefers that the rules require no minimum notice when tower construction is deemed not to affect the AM pattern. Alternatively, PCIA supports procedures for expedited notice to reduce delays.[35] The Joint Commenters support the 30-day notice proposal, but also suggest procedures for expedited notice of tower construction, citing similar provisions in the Commission's rules governing

[28] *See* Comments of the Association of Federal Communications Commission Engineers, Docket No. 93-177 (July 24, 2007) at 16-19.

[29] A nondirectional antenna produces a circular radiation pattern, i.e., the same radiation value in every direction from the antenna. The +/-2 dB circularity is a routine specification for VHF and UHF non-directional patterns.

[30] *See* Joint Comments at 4.

[31] *Id*. at 5. As defined in our new rules, a tower height in electrical degrees is equal to [(Tower height in meters)/AM wavelength in meters)] x 360 degrees. *See* Appendix B (adopting new rule 47 C.F.R. § 1.30001(b)).

[32] *See* Appendix B, Section 1.30002(e) of the new Rules. We have also revised Section 1.30003(b) of the proposed rules ("Installations on a directional AM array"), which is an updated version of Section 73.1692(a) and (b) of the Commission's Rules. The rule has been updated to reflect our experience with the new moment method proofs, Section 73.151(c), adopted earlier in this proceeding.

[33] *See* Section 1.30002(a) and (b) of the new Rules.

[34] *See* Comments of Greater Media at 4.

[35] *See* Comments of PCIA at 2.

fixed microwave services in Part 101.[36] Further, the Joint Commenters recommend that the rules incorporate a narrow exception to the prior notice requirement to address "urgent but temporary needs in the event of an emergency situation."[37] Finally, the Joint Commenters propose that the rules include detailed notification procedures, explicitly listing the information to be included in the notice, such as a physical description of the planned construction, and adding a requirement for a response by the affected AM station.[38] We agree with the Joint Commenters' proposals, and accordingly, adopt the 30-day notification period, with the addition of specific notification procedures, requests for expedited notice, and an emergency exception.[39] We believe this represents a reasonable compromise between the competing proposals. A 30-day notification period, in lieu of the 120-day period proposed by Greater Media, will minimize unnecessary deployment delays. The detailed notification procedures will enable AM stations to effectively assess the impact of the proposed construction within the shorter 30-day period. Finally, the expedited notice process we adopt should allay PCIA's concerns and reduce construction delays.[40] We believe these new notification procedures, which are based on existing Commission rules,[41] will reduce the potential for disputes, provide adequate notice to AM licensees, and enable affected AM licensees to more easily verify the proponent's analysis without unnecessary duplication of work.

12. The Commission also sought comment on the point in the AM licensing process at which the notification procedures should apply. Specifically, the *Second Further Notice* asked whether a tower proponent should be required to notify the permittee of an unconstructed AM station, or whether notification procedures should apply only when the AM station is licensed or operating pursuant to Program Test Authority (PTA) prior to construction of the nearby structure. In the absence of any comments on this issue, we will apply the notification procedures to AM stations that are licensed or operating pursuant to PTA. We will not require a tower proponent to notify the permittee of an unconstructed AM station. Because the facilities authorized by AM station construction permits often remain unconstructed when the permit expires or the permits are modified before the authorized facilities are constructed, we believe it would be unproductive to require tower proponents to analyze and protect unconstructed AM facilities. Moreover, because both the field strength measurements described in

[36] *See, e.g.*, 47 C.F.R § 101.103(d)(2). The Joint Commenters recommend that if the tower proponent delivers a notice of construction that is identified as "expedited," the proponent would then be permitted to commence construction upon receipt from the potentially affected AM station licensee of either a written concurrence to the construction project, or a verbal concurrence that is followed by a written concurrence. *See* Joint Comments at 6.

[37] Joint Commenters Reply Comments at 6. In emergency situations involving essential public services, public health, or public welfare, the Joint Commenters propose that a tower proponent should be permitted to erect a temporary new tower or make a temporary significant modification to an existing tower without prior notice to potentially affected AM stations, provided that the tower proponent provides written notice to such AM stations within five days of the erection or modification of the tower and cooperates with such AM stations to promptly remedy any pattern distortions that arise as a consequence of such construction.

[38] *See* Joint Comments at 6. The Joint Commenters recommend that the new rules specify that construction notices should be in writing, and that such notices include: (1) the coordinates of the tower to be constructed or modified; (2) a physical description of the planned construction; and (3) the results of the analysis showing the predicted effect on the AM pattern, if performed.

[39] *See* Appendix B (adopting new rule 47 C.F.R. § 1.30004(d) and (e))

[40] *See* PCIA Reply Comments at 3 (acknowledging that an expedited notice process "would permit the rapid deployment of wireless infrastructure").

[41] New Section 1.30004 ("Notice of tower construction or modification near AM stations") is modeled after Section 101.103(d)(2) of the Commission's Rules.

Section 1.30002(f) and the adjustment of a detuning network[42] require the presence of the AM signal, we feel that this interpretation reasonably balances the interests of the AM station with those of the tower proponent.[43]

13. *Determination of distance from a directional AM station.* A non-directional AM antenna consists of a single tower, the coordinates of which appear in Commission databases. Directional AM antennas, on the other hand, consist of multiple towers, which may be several hundred meters apart. The relatively large spacing between directional AM towers leaves some potential for confusion when determining distances from a directional AM station. The proposed new rules require that proponents of new towers or significant modifications to existing towers examine the potential effects of the proposed construction activity on the nearby AM directional station if the tower is "within the lesser of 10 wavelengths or 3 kilometers of the AM [directional] station."[44] The proposed rules, however, do not specify the measuring point from which to calculate these critical distances. The Joint Commenters and Waterford each suggest clarifying the determination of distance from a directional AM station by specifying that the array center coordinates now used in the Consolidated Database System ("CDBS"), the Media Bureau's database, should be used for such calculations.[45] We agree, and revise the rule accordingly. This minor clarification is essential to facilitate compliance and mitigate confusion when determining distances, and is therefore a logical and necessary outgrowth of the proposed rules.[46]

14. *Towers that are excluded from the pre-construction evaluation.* The *Second Further Notice* sought comment on a rule provision to cover towers that are excluded from the routine pre-construction study and notification to the AM licensee, but that nonetheless affect an AM station's radiation pattern.[47] For example, there may be circumstances in which a tower more than 3 kilometers away may nevertheless affect a directional AM station. Similarly, a short tower or tower modification that would be otherwise excluded from study may affect an AM station if it is very close to the AM antenna. Commenters were divided on this issue. According to Waterford, "the proposed rules leave the tower proponents' responsibilities open-ended" in these situations.[48] Waterford asserts that tower proponents

[42] *See* 47 C.F.R. § 1.30002(a) and (b). A tower proponent that causes a disturbance to the radiation pattern of an AM station, as defined in Section 1.30002(a) or (b), is responsible for taking appropriate ameliorative action to correct such disturbance, such as installing, maintaining, and, if necessary, adjusting the detuning apparatus, in order to restore proper operation of the antenna.

[43] In contrast, analysis using moment method computer modeling does not require the potentially affected AM station to be operating at the time of analysis. Accordingly, even if an AM station is silent, a tower proponent can and should utilize moment method modeling to assess whether the proposed construction or modification will affect the AM station's pattern. Both field strength measurements and detuning, however, can only be done when an AM station is operating with its licensed parameters.

[44] New Section 1.30002(b).

[45] *See* Joint Comments at 3-4; Comments of Waterford at 4.

[46] *See, e.g., Public Service Commission of the District of Columbia v. FCC*, 906 F.2d 713, 717 (D.C. Cir. 1990) (stating that "it is well established that the exact result reached after a notice and comment rulemaking need not be set out in the initial notice for the notice to be sufficient. Rather, the final rule must be 'a logical outgrowth' of the rule proposed").

[47] *Second Further Notice*, 23 FCC Rcd at 14273 ("[S]hould any final rule on this issue, if adopted, include a provision requiring tower proponents to protect the AM station upon submission of a credible demonstration that the tower affects the AM pattern? We tentatively conclude that such a provision would be appropriate."). "Study" refers to the requirement that a party proposing the construction or significant modification of a tower within the threshold height limits examine the potential impact of the construction or modification using a moment method analysis or field strength measurements.

[48] *See* Comments of Waterford at 5.

need to have their financial obligations clearly defined from the outset and that mandating "clear documentation at or very near the time of construction about the need to detune" would provide tower proponents with more certainty.[49] Greater Media supports the proposed rule provision, stating that "there are no absolutes in such situations."[50] The Joint Commenters support the proposed rule provision with modifications. They advocate defining the type of analysis that would constitute a credible showing that the tower construction has affected the AM station. Specifically, the Joint Commenters recommend that the AM station must supply either a moment method analysis or field strength measurements to support its claim. The tower proponent, according to the Joint Commenters, should be afforded an opportunity to respond to the AM station's showing of adverse impact. Finally, the Joint Commenters propose that the rule include a two-year time limit within which the AM station must make a claim of adverse impact.[51]

15. We agree that the proposed rule should be modified. Defining the type of showing required from an AM station when an otherwise excluded tower construction or modification affects the station's radiation pattern and requiring the AM station to share the study with the tower proponent, as the Joint Commenters suggest, will facilitate resolution of possible problems. We also acknowledge the difficulties of potentially open-ended financial obligations, as Waterford notes. A reasonable time limit on claims of adverse impact will encourage AM station licensees to promptly identify potential pattern disruptions and provide tower proponents with greater certainty regarding future potential liabilities. We find, however, that a time limit of less than two years will not allow an AM station licensee sufficient time to ascertain that its pattern has been adversely affected, identify the source of the pattern disruption, and prepare and submit an adverse impact showing.[52] We therefore require that showings of adverse impact under this rule section be made within two years after the date of completion of the tower construction or modification.[53] The two-year time frame will protect the interests of AM stations while relieving tower proponents of long-term financial obligations. New Section 1.30002(g) includes these modifications to the proposed rule.

16. *Structures subject to the rules.* The *Second Further Notice* proposed to apply the revised rules to construction of all communications towers falling within established geographic limits and above a specified height, not only to towers requiring notice to the Federal Aviation Administration and registration under Part 17.[54] The Commission sought comment on whether the Commission may apply the proposed rules to the owners of structures that are not otherwise subject to Commission licensing processes, such as towers that do not require registration and which no Commission licensee, permittee or applicant uses or proposes to use. The *Second Further Notice* asked whether, alternatively, the Commission should prohibit applicants from proposing and licensees or permittees from using a tower when the owner has not complied with notice and detuning requirements. The Joint Commenters support applying the new rules to either all tower owners or, alternatively, to all Commission licensees proposing

[49] *Id.*

[50] *See* Comments of Greater Media at 3.

[51] *See* Joint Comments at 6.

[52] *See id.* at 8 (asserting that submission of an adverse impact showing within two years of construction or modification of the tower is reasonable and provides AM station licensees sufficient time to complete the showing).

[53] Showings of adverse impact should be submitted to the Bureau which oversees the offending Commission licensee or permittee, i.e., if the alleged offender is a public mobile service licensee, the showing would be submitted to the Wireless Telecommunications Bureau.

[54] *See* note 11, *supra*; *Second Further Notice*, 23 FCC Rcd at 14273, ¶ 19.

to use towers that may fall under the provisions of the new rules. Greater Media and CDE also favor applying the new rules to non-licensee tower owners.[55]

17. Many structures other than communications towers may re-radiate an AM signal, *e.g.*, water towers, power lines, and buildings. Furthermore, the parties that construct both registered towers and towers that do not require registration may or may not be Commission authorization holders, and a tower may or may not house a Commission licensee at the time of construction.[56] The *Second Further Notice* sought comment on whether the Commission should assert jurisdiction over non-licensee tower owners and whether the towers, as incidental radiators, would be subject to Part 15 restrictions.[57] No party addressed the issue of the Commission's jurisdiction over non-licensees who build towers and other structures near AM stations. Greater Media, the only commenter to address these issues, expressed its belief that "such structures would very likely fall within the restrictions of Part 15 in regard to incidental radiators,"[58] but offered no support for its contention. While the Commission's jurisdictional authority over non-licensees is well established for certain purposes,[59] we find it administratively prudent to apply the rules only to applicants, licensees, and permittees. We adopt the *Second Further Notice* proposal that will bar applicants from proposing and licensees and permittees from using towers that have not completed our revised study and notice process and any necessary detuning. We clarify that under this rule, a licensee or permittee may locate an antenna on a tower that did not complete this process prior to construction if either the tower owner or any collocator completes all the required steps before the licensee's or permittee's collocation.[60] Similarly, we prohibit a licensee or permittee from locating an antenna on a tower that an AM station owner has shown creates a disturbance to its radiation pattern unless appropriate remedial action has been taken.[61] We find this approach promotes the public interest in maximizing collocation opportunities for wireless and broadcast licensees and permittees because it: (1) provides an incentive for all tower owners to complete the study and notice process before construction in order to make the tower most readily available for collocation; (2) provides an avenue through which towers that do not complete the process before construction may become available for collocation; and (3) avoids interfering with contractual or other business arrangements between Commission authorization holders and non-authorization holder tower owners.

18. *Application of the new rules* The *Second Further Notice* tentatively concluded that any new rules adopted should be applied only to towers constructed or modified after the effective date of the new rules, *i.e.*, where actual construction commences after the effective date. Commenters addressing this issue were divided. Greater Media supports this approach,[62] while Ronald L. Myers suggests

[55] *See* Comments of Greater Media at 1; Comments of CDE at 1.

[56] Both wireless licensees and broadcast licensees and permittees frequently locate antennas on towers owned by non-licensees or permittees in order to provide services to the public.

[57] Specifically, the Commission sought comment on whether the proposed rules should apply to the owners of structures that are not otherwise subject to Commission licensing processes, *i.e.*, whether the rules should apply to structures such as towers that do not require registration and that no Commission licensee, permittee or applicant uses or proposes to use. *See Second Further Notice*, 23 FCC Rcd at 14273, ¶ 19.

[58] Comments of Greater Media at 2, note 1.

[59] *See, e.g.*, 47 U.S.C. §§ 303(q) and 503(b)(5); *see also Compulsory Copyright License for Cable Retransmission*, Report, 4 FCC Rcd 6711, 6713 (1989) (Commission asserts jurisdiction over non-licensee entities where such entities are regulated under Part 15).

[60] *See* new Section 1.30002(i).

[61] *See* new Section 1.30002(g).

[62] Comments of Greater Media at 6.

"making this rule retroactive."[63] Crawford recommends that, if the Commission applies the new rules only to towers constructed or modified after the new rules' effective date, the Commission should also: (1) clarify and identify how it will respond to pending formal tower complaints, and (2) employ language to "deal with existing situations wherein AM stations must operate with STA because of uncoordinated antenna structure construction near their arrays."[64]

19. We affirm the tentative conclusion to apply the new rules to towers constructed or modified after the effective date of the new rules, an approach supported and/or unopposed by the majority of commenters. In addition, as explained below, we will apply the new rules' remediation requirement to construction commenced before the effective date, except that pending complaints will be resolved in accordance with any pre-existing rules that are applicable to the service in question. New Section 1.30002(h) includes this modification to the proposed rules.[65] Consistent with the other rules adopted in this proceeding, the rules will only apply to Commission applicants, permittees, and licensees,[66] and, in accordance with the "newcomer" policy, will only apply to construction or modification that has adversely affected preexisting AM stations, *i.e.*, stations that were operating before the tower proponent commenced construction or modification. Although the new rules will not apply to tower owners that are not applicants and do not hold Commission authorizations, this does not mean that a Commission licensee or permittee can locate an antenna on such a tower with no obligations. Rather, we clarify that as of the effective date of the new rules, a Commission applicant may not propose, and a Commission licensee or permittee may not locate, an antenna on an existing tower that is causing a disturbance to the radiation pattern of an AM station, as defined in Section 1.30002(a) or (b), and that has not previously been studied for AM radiation pattern disturbance, unless the applicant, licensee, permittee or tower owner completes the new study and notification process and takes appropriate ameliorative action to correct any disturbance, such as detuning the tower.[67]

20. We recognize, as Crawford highlights, that there may be circumstances in which an AM station has been adversely affected by tower construction or modification authorized and either commenced or completed *before* or on the effective date of the new rules. The Commission's longstanding "newcomer" policy obligates FCC licensees to remedy interference caused to existing stations.[68] We acknowledge, however, that the current absence of explicit rules across all services with respect to tower construction near AM arrays has led to confusion as to what should be done to protect the AM station, and therefore, inconsistent protection to AM stations.[69] Accordingly, we direct any affected

[63] Comments of Ronald L. Myers at 1.

[64] Comments of Crawford at 2 (explaining that after a Part 90 tower was constructed near its affiliate station, the station filed a complaint seeking an order to require the Part 90 licensee to detune its tower, and the station has been forced to operate pursuant to STA while the complaint remains pending).

[65] We recognize that there may be pending interference complaints before the Commission. To the extent possible, these complaints should be resolved under the current rules, *i.e.*, Sections 22.371, 27.63, and 73.1692. We recognize, however, that because of the lack of explicit rules in all services regarding tower construction near AM arrays, it may not be feasible to resolve all pending complaints pursuant to existing rules. In such cases (*i.e.*, complaints relating to services for which there are no explicit rules), we will process the pending complaint under the new rules, and we direct the affected AM station to re-submit its complaint to the Commission within the one-year timeframe and submit a showing in accordance with new Section 1.30002(h) of the Commission's Rules.

[66] *See* new Section 1.30000.

[67] *See* Appendix B, Section 1.30000 of the new Rules.

[68] *See* notes 7-8, *supra*.

[69] The potential damaging effects of tower construction near AM arrays are the same, regardless of whether the tower is employed in the service of broadcast, auxiliary, cellular, private land mobile, or other use. As noted earlier, (continued….)

AM station seeking remediation to submit a showing that its operation has been adversely affected by tower construction or modification authorized and either commenced or completed before or on the effective date of the new rules. Such showings must be made within one year after the effective date of the new rules. A one-year time frame will allow a potentially affected AM station sufficient time to identify the source of the pattern disruption and prepare and submit an adverse impact showing. We authorize the Commission staff, if necessary, to direct the tower owner to take appropriate ameliorative action to correct disturbances to the radiation pattern of an AM station caused by the tower construction or modification, such as installing, maintaining, and, if necessary, adjusting any detuning apparatus necessary to restore proper operation of the AM antenna. This rule change does not impose any new obligations on licensees or permittees with respect to disturbances caused to AM antenna patterns. It does not alter the tower owner's underlying responsibility to cooperate and remediate interference caused to existing AM stations. Rather, this change simply clarifies and codifies this implicit remediation obligation, or the "newcomer" policy, a mainstay of interference protection.[70]

21. *Cost-Benefit Analysis.* We believe that the benefits of our new rules outweigh any potential costs. The new rules are part of the our effort to: (1) harmonize, streamline, and simplify the rules regarding tower construction and modification near AM stations; (2) improve the protection afforded to AM stations; and (3) reduce the time required to determine the impact of nearby tower construction on affected AM stations and the expense associated with the analysis.

22. Our current rules contain several sections concerning tower construction near AM antennas (Sections 73.1692, 22.371, and 27.63), which impose differing requirements on the broadcast and wireless entities, while other rule parts (such as Part 90 and Part 24) entirely lack provisions for protecting AM stations from the possible effects of nearby tower construction. Our new rules consolidate the disparate and service-specific rules and extends the rule to all Commission licensees and permittees constructing towers. The adoption of the new rules will therefore mitigate confusion among FCC licensees and permittees, given the current absence of explicit rules across all services, and ensure consistent protection to AM stations. The new rules not only exclude many cases for which measurements were previously required,[71] but also streamline the process of determining the impact of nearby tower construction and modification, thereby saving the tower proponent both time and money. Finally, by permitting the use of moment method modeling, the new rules eliminate the need for costly, time consuming field strength measurements.[72] We therefore conclude that the public interest benefits of the changes adopted herein outweigh any potential costs.

(Continued from previous page)
Sections 22.371, 27.63, and 73.1692 of the Commission's Rules contain explicit, albeit disparate, requirements for protecting AM stations from the effects of nearby tower construction. Other rule parts, such as Part 90 and Part 24, lack explicit provisions for protecting AM stations. Accordingly, an AM station adversely affected by tower construction by a Part 90 or Part 24 licensee must rely on the licensee's cooperation and goodwill to alleviate the interference, or if the interference cannot be resolved internally, file a complaint with the Commission. *See, e.g.*, Comments of Crawford at 2, *supra*, note 64.

[70] The fact that a new rule "is applied in a case arising from conduct antedating the [rule's] enactment" or "upsets expectations based in prior law" does not make it retroactive. *Landgraf v. USI Film Products*, 114 S. Ct. 1483, 1499 (1994). Rather, a rule is retroactive only if it "attaches new legal consequences to events completed before its enactment." *Id.* Such is not the case here.

[71] The new rules eliminate short towers from consideration and exclude many routine cases in which antennas are added to existing towers.

[72] Many commenters also highlight the multiple benefits arising from the new rules, emphasizing that the new rules will: (1) simplify and clarify the process of protecting AM stations whose antenna patterns can be adversely affected by the proximity of new towers or antennas; (2) reduce confusion among affected FCC licensees with respect to the proper procedures for the protection of AM broadcast stations; (3) reduce both the time and expense associated with performing the analysis; and (4) reduce reliance on costly, time consuming, and ultimately ambiguous field strength (continued….)

IV. SECOND ORDER ON RECONSIDERATION

23. *Background.* In response to the *Second Report and Order*, which adopted rules permitting AM radio licensees to use computer modeling techniques to demonstrate that directional AM antennas perform as authorized, Cohen, Dippell and Everist, P.C. ("CDE") filed a timely petition for reconsideration seeking clarification and alteration of the new rules. CDE claims that the new rules adopted in the *Second Report and Order* do not clearly define what information an AM station should submit with a moment method proof of performance pursuant to Section 73.151(c) of the rules, and also do not explain how the Commission will determine whether such a proof of performance is acceptable. CDE urges the Commission to clarify these questions with a *Public Notice*. Finally, CDE reiterates comments it made earlier in this proceeding, questioning directional AM stations' use of computer modeling techniques, given that such techniques do not account for certain effects of the local environment on the AM antenna pattern.[73]

24. *Discussion.* As CDE suggests, the new rules adopted in the *Second Report and Order* represent a significant departure from long-established procedures in AM radio. In order to assist licensees, the Media Bureau issued a *Public Notice* clarifying certain requirements of the new rules and answering common questions.[74] Accordingly, CDE's request to the same effect is now moot. Moreover, the Media Bureau's experience with the new rules since the *Public Notice* indicates that most applicants understand the requirements, and the Bureau stands ready to answer additional questions. Finally, regarding CDE's repeated concern about the use of moment method techniques without regard to the local environment, the Commission addressed this matter in the *Second Report and Order*.[75] It is well established that the Commission does not grant reconsideration for the purpose of debating matters on which it has already deliberated.[76] We therefore dismiss in part as moot and deny in all other respects CDE's Petition for Reconsideration.

V. CONCLUSION

25. The rules adopted herein are designed to streamline and rationalize our rules with regard to the way in which the potential impact of construction near AM stations can be assessed. Our actions today, made possible by the support and contributions of a broad coalition of technical experts and broadcasters, represent a significant step forward in modernizing our licensing procedures.

(Continued from previous page)
measurements. *See* Joint Comments at 2; Comments at Waterford at 2; Comments of NAB at 2; Comments of PCIA at 1.

[73] *See* July 23, 2007, Comments of CDE at 7.

[74] *See* "Media Bureau Clarifies Procedures for AM Directional Antenna Performance Verification Using Moment Method Modeling," *Public Notice*, DA 09-2340, released October 29, 2009.

[75] *See Second Report and Order*, 23 FCC at 14271 (acknowledging concerns that a moment method proof will not account for the effects of nearby reradiators on the AM pattern, but finding that the alternative of taking field strength measurements in the presence of reradiating structures may offer no more accurate a depiction of the pattern shape than moment method techniques do and, further, makes compliance very difficult for many AM stations).

[76] *See WWIZ, Inc.*, 37 FCC 685 (1965), *aff'd sub. nom. Lorain Journal Co. v. FCC*, 351 F.2d 824 (D.C. Cir. 1965).

VI. PROCEDURAL MATTERS

A. Regulatory Flexibility Analysis

26. Pursuant to the Regulatory Flexibility Act of 1980, as amended,[77] the Commission has prepared a Final Regulatory Flexibility Analysis ("FRFA") of the possible significant economic impact on small entities of the policies and rules addressed in this document. The FRFA is set forth in Appendix C.

B. Paperwork Reduction Act Analysis

27. This document contains new and modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. The requirements will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. The Commission will publish a separate notice in the Federal Register inviting comment on the new or revised information collection requirements adopted in this document. The requirements will not go into effect until OMB has approved them and the Commission has published a notice announcing the effective date of the information collection requirements. In addition, this document contains new and modified "information collection burdens for small business concerns with fewer than 25 employees," pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. § 3506(c)(4). In regard to the new and modified information collection requirements adopted herein, we previously sought specific comment on how the Commission might "further reduce the information collection burden for small business concerns with fewer than 25 employees." We received no comments in response to this issue. We find that the new and modified information collection requirements must apply fully to small entities (as well as to others) to ensure that AM broadcast station antenna patterns are not disturbed.

28. In this document, we have assessed the effects of the new rules for tower construction near AM radio stations adopted herein, and find that these new rules would standardize and simplify the information collection burden for all affected entities, including small business concerns with fewer than 25 employees.

C. Congressional Review Act

29. The Commission will send a copy of the *Third Report and Order*, including the FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act.[78] In addition, the Commission will send a copy of the *Third Report and Order*, including the FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of the *Third Report and Order*, including the FRFA (or summaries thereof), will also be published in the Federal Register.[79]

D. Additional Information

30. For additional information on this proceeding, please contact Susan Crawford, Susan.Crawford@fcc.gov, (202) 418-2754, Audio Division, Media Bureau.

VII. ORDERING CLAUSES

31. Accordingly, **IT IS ORDERED** that, pursuant to the authority contained in Sections 1, 4(i) 303, 308, 309, 310, and 319 of the Communications Act of 1934, as amended; 47 U.S.C. §§ 151, 154(i), 303, 308, 309, 310, and 319, this *Third Report and Order* **IS ADOPTED**.

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[77] 5 U.S.C. §§ 601 *et seq.*

[78] *See* 5 U.S.C. § 801(a)(1)(A).

[79] *See* 5 U.S.C. § 604(b).

32. **IT IS FURTHER ORDERED** that, pursuant to the authority contained in Sections 1, 4(i) 303, 308, 309, 310, and 319 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 303, 308, 309, 310, and 319, 47 C.F.R. Part 1, Part 22, Part 27, and Part 73 of the Commission's Rules **ARE AMENDED**, as set forth in Appendix B.

33. **IT IS FURTHER ORDERED** that the Petition for Reconsideration filed December 1, 2008, by Cohen, Dippell and Everist, P.C. **IS DISMISSED IN PART AS MOOT AND IS DENIED IN ALL OTHER RESPECTS.**

34. **IT IS FURTHER ORDERED** that the rules contained herein **SHALL BECOME EFFECTIVE** upon Commission publication of a document in the Federal Register announcing that OMB has approved them.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

List of Commenters

AM Directional Antenna Performance Verification Coalition:

Broadcasters

Beasley Broadcast Group, Inc.
Bonneville International
Buckley Broadcasting Corporation
CBS Radio Inc.
Citadel Broadcasting Company
Clear Channel Radio
Cox Radio, Inc.
Crawford Broadcasting Company
Cumulus Media Inc.
Emmis Communications Corp.
Entercom Communications Corp.
Entravision Communications Corp.
Journal Broadcast Group
Lincoln Financial Media
Morris Communications Company, LLC
Multicultural Radio Broadcasting, Inc.
Peak Broadcasting LLC
Radio One, Inc.
Regent Communications
Saga Communications
Salem Communications Corporation
The Walt Disney Company

Consulting Engineers/Equipment Manufacturers

Carl T. Jones Corporation
Cavell, Mertz & Associates, Inc.
Communications Technologies, Inc.
duTreil, Lundin & Rackley, Inc.
Edward A. Schober, P.E., Radiotechniques Engineering, LLC
Hammett & Edison, Inc.
Hatfield & Dawson Consulting Engineers, LLC
Khanna & Guill, Inc.
Sellmeyer Engineering

Cohen, Dippell and Everist, P.C.
Crawford Broadcasting Company
Greater Media, Inc.
Hatfield & Dawson Consulting Engineers, LLC
Ronald L. Myers
National Association of Broadcasters
PCIA – The Wireless Infrastructure Association
The Land Mobile Communications Council
Waterford Consultants, LLC
The Wireless Communications Association International, Inc.

List of Reply Commenters

AM Directional Antenna Performance Verification Coalition
PCIA—The Wireless Infrastructure Association

APPENDIX B

Final Rules

PART 1 – PRACTICE AND PROCEDURE

The authority for Part 1 continues to read as follows:

AUTHORITY: 47 U.S.C. 79 *et seq*.; 47 U.S.C. 151, 154(i), 154(j), 155, 157, 225, 227, 303(r), and 309.

Amend § 1 to add Subpart AA as follows:

Subpart AA. Disturbance of AM broadcast station antenna patterns.

§ 1.30000 Purpose. This rule part protects the operations of AM broadcast stations from nearby tower construction that may distort the AM antenna patterns. All parties holding or applying for Commission authorizations that propose to construct or make a significant modification to an antenna tower or support structure in the immediate vicinity of an AM antenna, or propose to install an antenna on an AM tower, are responsible for completing the analysis and notice process described in this subpart, and for taking any measures necessary to correct disturbances of the AM radiation pattern, if such disturbances occur as a result of the tower construction or modification or as a result of the installation of an antenna on an AM tower. In the event these processes are not completed before an antenna structure is constructed, any holder of or applicant for a Commission authorization is responsible for completing these processes before locating or proposing to locate an antenna on the structure, as described in this subpart.

§ 1.30001 Definitions. For purposes of this subpart:

(a) Wavelength at the AM frequency. In this subpart, critical distances from an AM station are described in terms of the AM wavelength. The AM wavelength, expressed in meters, is computed as follows:

(300 meters)/(AM frequency in megahertz)=AM wavelength in meters.

For example, at the AM frequency of 1000 kHz, or 1 MHz, the wavelength is (300/1 MHz) = 300 meters.

(b) Electrical degrees at the AM frequency. This term describes the height of a proposed tower as a function of the frequency of a nearby AM station. To compute tower height in electrical degrees, first determine the AM wavelength in meters as described in paragraph (a). Tower height in electrical degrees is computed as follows:

[(Tower height in meters)/AM wavelength in meters)] x 360 degrees = Tower height in electrical degrees.

For example, if the AM frequency is 1000 kHz, then the wavelength is 300 meters, per paragraph (a). A nearby tower 75 meters tall is therefore [75/300] x 360 = 90 electrical degrees tall at the AM frequency.

(c) Proponent. The term proponent refers in this section to the party proposing tower construction or significant modification of an existing tower or proposing installation of an antenna on an AM tower.

(d) Distance from the AM station. The distance shall be calculated from the tower coordinates in the case of a nondirectional AM station, or from the array center coordinates given in CDBS or any successor database for a directional AM station.

§1.30002 Tower construction or modification near AM stations.

(a) Construction near a nondirectional AM station. Proponents of construction or significant modification of a tower which is within one wavelength of a nondirectional AM station, and is taller than 60 electrical degrees at the AM frequency, must notify the AM station at least 30 days in advance of the commencement of construction. The proponent shall examine the potential impact of the construction or modification as described in paragraph (c). If the construction or modification would distort the radiation

pattern by more than 2 dB, the proponent shall be responsible for the installation and maintenance of any detuning apparatus necessary to restore proper operation of the nondirectional antenna.

(b) Construction near a directional AM station. Proponents of construction or significant modification of a tower which is within the lesser of 10 wavelengths or 3 kilometers of a directional AM station, and is taller than 36 electrical degrees at the AM frequency, must notify the AM station at least 30 days in advance of the commencement of construction. The proponent shall examine the potential impact of the construction or modification as described in paragraph (c). If the construction or modification would result in radiation in excess of the AM station's licensed standard pattern or augmented standard pattern values, the proponent shall be responsible for the installation and maintenance of any detuning apparatus necessary to restore proper operation of the directional antenna.

(c) Proponents of construction or significant modification of a tower within the distances defined in (a) and (b) herein of an AM station shall examine the potential effects thereof using a moment method analysis. The moment method analysis shall consist of a model of the AM antenna together with the potential re-radiating tower in a lossless environment. The model shall employ the methodology specified in § 73.151(c) of this chapter, except that the AM antenna elements may be modeled as a series of thin wires driven to produce the required radiation pattern, without any requirement for measurement of tower impedances.

(d) A significant modification of a tower in the immediate vicinity of an AM station is defined as follows:

(1) any change that would alter the tower's physical height by 5 electrical degrees or more at the AM frequency; or (2) the addition or replacement of one or more antennas or transmission lines on a tower that has been detuned or base-insulated.

(e) The addition or modification of an antenna or antenna-supporting structure on a building shall be considered a construction or modification subject to the analysis and notice requirements of this subpart if and only if the height of the antenna-supporting structure alone exceeds the thresholds in paragraphs (a) and (b) herein.

(f) With respect to an AM station that was authorized pursuant to a directional proof of performance based on field strength measurements, the proponent of the tower construction or modification may, in lieu of the study described in paragraph (c), demonstrate through measurements taken before and after construction that field strength values at the monitoring points do not exceed the licensed values. In the event that the pre-construction monitoring point values exceed the licensed values, the proponent may demonstrate that post-construction monitoring point values do not exceed the pre-construction values. Alternatively, the AM station may file for authority to increase the relevant monitoring- point value after performing a partial proof of performance in accordance with § 73.154 to establish that the licensed radiation limit on the applicable radial is not exceeded.

(g) Tower construction or modification that falls outside the criteria described in the preceding paragraphs is presumed to have no significant effect on an AM station. In some instances, however, an AM station may be affected by tower construction or modification notwithstanding the criteria set forth above. In such cases, an AM station may submit a showing that its operation has been affected by tower construction or modification. Such a showing shall consist of either a moment method analysis as described in paragraph (c), or of field strength measurements. The showing shall be provided to (i) the tower proponent if the showing relates to a tower that has not yet been constructed or modified and otherwise to the current tower owner, and (ii) to the Commission, within two years after the date of completion of the tower construction or modification. If necessary, the Commission shall direct the tower proponent or tower owner, if the tower proponent or tower owner holds a Commission authorization, to install and maintain any detuning apparatus necessary to restore proper operation of the AM antenna. An applicant for a Commission authorization may not propose, and a party holding a Commission authorization may not locate, an antenna on any tower or support structure that has been shown to affect an AM station's operation pursuant to this subparagraph, or for which a disputed showing of effect on an

AM station's operation is pending, unless the applicant, party, or tower owner notifies the AM station and takes appropriate action to correct the disturbance to the AM pattern.

(h) An AM station may submit a showing that its operation has been affected by tower construction or modification that was commenced or completed prior to or on the effective date of the rules adopted in this Part pursuant to MM Docket No. 93-177. Such a showing shall consist of either a moment method analysis as described in paragraph (c), or of field strength measurements. The showing shall be provided to the current tower owner and the Commission within one year of the effective date of the rules adopted in this Part pursuant to MM Docket No. 93-177. If necessary, the Commission shall direct the tower owner, if the tower owner holds a Commission authorization, to install and maintain any detuning apparatus necessary to restore proper operation of the AM antenna.

(i) An applicant for a Commission authorization may not propose, and a party holding a Commission authorization may not locate, an antenna on any tower or support structure, whether constructed before or after the effective date of these rules, that meets the criteria in paragraph (a) and (b) of this section, unless the analysis and notice process described in this subpart, and any necessary measures to correct disturbances of the AM radiation pattern, have been completed by the tower owner, the party proposing to locate the antenna, or any other party, either prior to construction or at any other time prior to the proposal or antenna location.

§ 1.30003. Installations on an AM antenna.

(a) Installations on a nondirectional AM tower. When antennas are installed on a nondirectional AM tower the AM station shall determine the operating power by the indirect method (see § 73.51). Upon completion of the installation, antenna impedance measurements on the AM antenna shall be made. If the resistance of the AM antenna changes by more than 2 percent (see § 73.45(c)(1)), an application on FCC Form 302-AM (including a tower sketch of the installation) shall be filed with the Commission for the AM station to return to direct power measurement.

(b) Installations on a directional AM array. Before antennas are installed on a tower in a directional AM array, the proponent shall notify the AM station so that, if necessary, the AM station may determine operating power by the indirect method (see § 73.51) and request special temporary authority pursuant to § 73.1635 to operate with parameters at variance.

(1) For AM stations licensed via field strength measurements (see § 73.151(a)), a partial proof of performance as defined by § 73.154 shall be conducted by the tower proponent both before and after construction to establish that the AM array will not be and has not been adversely affected. If the operating parameters of the AM array change following the installation, the results of the partial proof of performance shall be filed by the AM station with the Commission on Form 302-AM.

(2) For AM stations licensed via a moment method proof (see § 73.151(c)), a base impedance measurement on the tower being modified shall be made by the tower proponent as described in § 73.151(c)(1). The result of the new tower impedance measurement shall be retained in the station's records. If the new measured base resistance and reactance values of the affected tower differ by more than +/- 2 ohms and +/- 4 percent from the corresponding modeled resistance and reactance values contained in the last moment method proof, then the station shall file Form 302-AM. The Form 302-AM shall be accompanied by the new impedance measurements for the modified tower and a new moment method model for each pattern in which the tower is a radiating element. Base impedance measurements for other towers in the array, sampling system measurements, and reference field strength measurements need not be repeated. The procedures described in this paragraph may be used as long as the affected tower continues to meet the requirements for moment method proofing after the modification.

(c) When the AM station is required to file Form 302-AM following an installation as set forth above, the Form 302-AM shall be filed before or simultaneously with any license application associated with the

installation. If no license application is filed as a result of the installation, the Form 302-AM shall be filed within 30 days after the completion of the installation.

§ 1.30004. Notice of tower construction or modification near AM stations.

(a) Proponents of proposed tower construction or significant modification to an existing tower near an AM station that are subject to the notification requirement in §§ 1.30002-1.30003 shall provide notice of the proposed tower construction or modification to the AM station at least 30 days prior to commencement of the planned tower construction or modification. Notice shall be provided to any AM station that is licensed or operating under Program Test Authority using the official licensee information and address listed in CDBS or any successor database. Notification to an AM station and any responses may be oral or written. If such notification and/or response is oral, the party providing such notification or response must supply written documentation of the communication and written documentation of the date of communication upon request of the other party to the communication or the Commission. Notification must include the relevant technical details of the proposed tower construction or modification. At a minimum, the notification should include the following:

Proponent's name and address.

Coordinates of the tower to be constructed or modified.

Physical description of the planned structure.

Results of the analysis showing the predicted effect on the AM pattern, if performed.

(b) Response to a notification should be made as quickly as possible, even if no technical problems are anticipated. Any response to a notification indicating a potential disturbance of the AM radiation pattern must specify the technical details and must be provided to the proponent within 30 days. If no response to notification is received within 30 days, the proponent may proceed with the proposed tower construction or modification.

(c) The 30-day response period is calculated from the date of receipt of the notification by the AM station. If notification is by mail, this date may be ascertained by:

(1) The return receipt on certified mail;

(2) The enclosure of a card to be dated and returned by the recipient; or

(3) A conservative estimate of the time required for the mail to reach its destination, in which case the estimated date when the 30-day period would expire shall be stated in the notification.

(d) An expedited notification period (less than 30 days) may be requested when deemed necessary by the proponent. The notification shall be identified as "expedited" and the requested response date shall be clearly indicated. The proponent may proceed with the proposed tower construction or modification prior to the expiration of the 30-day notification period only upon receipt of written concurrence from the affected AM station (or oral concurrence, with written confirmation to follow).

(e) To address immediate and urgent communications needs in the event of an emergency situation involving essential public services, public health, or public welfare, a tower proponent may erect a temporary new tower or make a temporary significant modification to an existing tower without prior notice to potentially affected nearby AM stations, provided that the tower proponent shall provide written notice to such AM stations within five days of the construction or modification of the tower and shall cooperate with such AM stations to promptly remedy any pattern distortions that arise as a consequence of such construction.

PART 22 – PUBLIC MOBILE SERVICES

The authority for Part 22 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302, 303, 309, and 332.

§ 22.371 [Removed].

Remove § 22.371.

PART 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

The authority for Part 27 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337 unless otherwise noted.

§ 27.63 [Removed].

Remove § 27.63.

PART 73 – RADIO BROADCAST SERVICES

The authority for Part 73 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 303, 334, 336 and 339.

Amend § 73.45(c) to read as follows:

§ 73.45 AM antenna systems.

*****

(c) Should any changes be made or otherwise occur which would possibly alter the resistance of the antenna system, the licensee must commence the determination of the operating power by a method described in § 73.51(a)(1) or (d). (If the changes are due to the addition of antennas to the AM tower, see § 1.30003.) ***

Amend § 73.316(e) to read as follows:

§ 73.316 FM antenna systems.

*****

(e) Where an FM licensee or permittee proposes to mount its antenna on or near an AM tower, as defined in § 1.30002, the FM licensee or permittee must comply with § 1.30003 or § 1.30002, depending on whether the antenna is proposed to be mounted on an AM tower (§ 1.30003) or near an AM tower (§ 1.30002).

Amend § 73.685(h) to read as follows:

§ 73.685 Transmitter location and antenna system.

*****

(h) Where the TV licensee or permittee proposes to mount its antenna on or near an AM tower, as defined in § 1.30002, the TV licensee or permittee must comply with § 1.30003 or § 1.30002 .

Amend § 73.875(c) by revising the last sentence to read as follows:

§ 73.875 Modification of transmission systems.

*****

(c)*** In addition, for applications filed solely pursuant to paragraphs (c)(1) or (c)(2) of this section, where the installation is on or near an AM tower, as defined in § 1.30002, an exhibit demonstrating compliance with § 1.30003 or § 1.30002, as applicable, is also required.

(1)***

(2)***

Amend § 73.1675(c)(1) by revising the last sentence to read as follows:

§ 73.1675 Auxiliary antennas.

*****

(c)(1)*** Where an FM, TV, or Class A TV licensee or permittee proposes to mount an auxiliary facility on an AM tower, it must also demonstrate compliance with § 1.30003 in the license application.

*****

Amend § 73.1690(c) by revising the last sentence to read as follows:

§ 73.1690 Modification of transmission systems.

*****

(c) ***In addition, except for applications solely filed pursuant to paragraphs (c)(6) or (c)(9) of this section, where the installation is located on or near an AM tower, as defined in § 1.30002, an exhibit demonstrating compliance with § 1.30003 or § 1.30002, as applicable, is also required.

*****

§ 73.1692 [Removed].

Remove § 73.1692.

Amend § 73.6025(c) to read as follows:

§ 73.6025 Antenna system and station location.

*****

(c) Where a Class A TV licensee or permittee proposes to mount its antenna on or near an AM tower, as defined in § 1.30002, the Class A TV licensee or permittee must comply with § 1.30003 or § 1.30002.

*****

Amend § 74.1237(e) to read as follows:

§ 74.1237 Antenna location.

*****

(e) Where an FM translator or booster licensee or permittee proposes to mount its antenna on or near an AM tower, as defined in § 1.30002, the FM translator or booster licensee or permittee must comply with § 1.30003 or § 1.30002.

*****

APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act, as amended ("RFA"),[1] a Supplemental Initial Regulatory Flexibility Analysis ("IRFA") was incorporated in the *Second Further Notice of Proposed Rule Making* ("*Second Further Notice*") in this proceeding.[2] The Commission sought written public comments on the proposals in the *Second Further Notice*. None were received. This Final Regulatory Flexibility Analysis ("FRFA") conforms to the RFA.[3]

A. Need for, and Objectives of, the Proposed Rules

2. In the *Third Report and Order* in this proceeding, the Commission harmonizes and streamlines the Commission's rules regarding tower construction and modification near AM stations, incorporating moment method computer modeling techniques and simplifying the rule provisions. The new procedures were adopted in order to simplify the Media Bureau's licensing procedures.

3. The further rulemaking proceeding leading to the *Third Report and Order* was initiated to further reduce the regulatory burden on AM broadcasters by permitting the use of computer modeling techniques to verify AM directional antenna performance. In the *Second Further Notice*, the Commission tentatively concluded that the issue of tower construction and modification near AM stations should be addressed by a single rule applying to all tower construction and sought comment on proposed new rules which would appear in Part 1 of the Commission's Rules.

4. Existing Commission rules require Commission authorization holders to notify AM stations and take appropriate action when a tower is constructed within a fixed distance of an AM station. The new rules define the critical distance for directional AM stations as any distance less than ten wavelengths of the frequency of the AM station up to a maximum distance of three kilometers, as specified in existing rules for certain wireless licensees.[4] The rules designate moment method modeling as the principal means of determining whether a nearby tower affects an AM pattern. The rules also allow traditional partial proof measurements taken before and after tower construction as an alternative procedure when the AM station in question was licensed pursuant to field strength measurements. Lastly, the rules eliminate short towers from consideration and exclude many routine cases in which antennas are added to existing towers.

5. More specifically, the Commission adopted a threshold height for antennas, excluding most antenna structures atop buildings, except where the structure alone would be a significant re-radiator as defined in Section 1.30002(a) or (b). It also adopted a 30-day period in which those who build or modify a tower can notify an AM station in order to reduce the potential for disputes while providing adequate notice to AM licensees. Per one commenter's suggestion, the Commission added specific procedures including requests for expedited notice. In the absence of comments on the issue of when the notification procedures would apply, the Commission adopted its proposal to apply the notification procedures to AM stations that are licensed or operating pursuant to program test authority. It clarified the determination of distance from a directional AM station by specifying the use of the array center coordinates now used in the consolidated database system. It further adopted the rule provision in Section 1.30002(g) addressing

[1] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, 110 Stat. 857 (1996).

[2] *Second Further Notice*, 23 FCC Rcd at 14272.

[3] *See* 5 U.S.C. § 604.

[4] The critical distance for non-directional AM stations is one wavelength of the frequency of the AM station.

tower construction otherwise excluded, with certain modifications. In general, the Commission will apply the notification requirements only to Commission applicants, licensees, and permittees prospectively for towers constructed after the effective date of the new rules, but there may be circumstances in which an AM station has been adversely affected by prior tower construction. In such circumstances, the affected AM station may seek relief by filing a showing of adverse impact within two years of the effective date of the new rules, and the Commission may direct the tower owner to install and maintain any detuning apparatus necessary to restore proper operation of the AM station.

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

6. None.

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

7. 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.[5] The RFA defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental entity" under Section 3 of the Small Business Act.[6] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[7] 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.[8]

8. Nationwide, there are a total of approximately 22.4 million small businesses, according to SBA data.[9] A "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."[10] Nationwide, as of 2002, there were approximately 1.6 million small organizations.[11] The term "small governmental jurisdiction" is defined generally as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."[12] Census Bureau data for 2002 indicate that there were 87,525 local governmental jurisdictions in the United States.[13] We estimate that, of this total, 84,377 entities were "small governmental jurisdictions."[14] Thus, we estimate that most governmental jurisdictions are small.

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[5] 5 U.S.C. § 603(b)(3).

[6] *Id*. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies, "unless an agency, after consultation with the Office of Advocacy of the SBA and after opportunity for public comment, establishes one or more definitions of the term where appropriate to the activities of the agency and publishes the definition(s) in the Federal Register."

[7] *Id.*

[8] 15 U.S.C. § 632.

[9] *See* SBA, Programs and Services, SBA Pamphlet No. CO-0028, at page 40 (July 2002).

[10] 5 U.S.C. § 601(4).

[11] Independent Sector, The New Nonprofit Almanac & Desk Reference (2002).

[12] 5 U.S.C. § 601(5).

[13] U.S. Census Bureau, Statistical Abstract of the United States: 2006, Section 8, page 272, Table 415.

[14] We assume that the villages, school districts, and special districts are small, and total 48,558. *See* U.S. Census Bureau, Statistical Abstract of the United States: 2006, section 8, page 273, Table 417. For 2002, Census Bureau data indicate that the total number of county, municipal, and township governments nationwide was 38,967, of which 35,819 were small. *Id.*

9. **Wireless Telecommunications Carriers (except Satellite).** This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services.[15] The appropriate size standard under SBA rules is for the category Wireless Telecommunications Carriers. The size standard for that category is that a business is small if it has 1,500 or fewer employees.[16] Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees.[17] For this category, census data for 2007 show that there were 1,383 firms that operated for the entire year.[18] Of this total, 1,368 firms had employment of 999 or fewer employees and 15 had employment of 1000 employees or more.[19] Thus under this category and the associated small business size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities that may be affected by our proposed action.[20]

10. **Non-Licensee Tower Owners.** Many communications towers, while used to support multiple antennas for Commission licensees in various services, are owned by entities which are not themselves Commission licensees. Although tower owners that do not hold Commission authorizations are not directly responsible for complying with the new rules, Commission authorization holders cannot lease space and locate an antenna on a non-licensee's tower that is causing a disturbance to the radiation pattern of an AM station, unless the applicant, licensee, or tower owner takes appropriate ameliorative steps to correct the disturbance. Therefore, tower owners that do not hold Commission authorizations may be indirectly affected by the rules adopted in this proceeding. Communications towers fall into two categories: those requiring antenna structure registration, and those exempt from registration. The Commission's rules require that any entity proposing to construct an antenna structure over 200 feet or within the glide slope of an airport must register the antenna structure with the Commission on FCC Form 854.[21] As of September 3, 2008, there were 97,617 registration records in a 'Constructed' status and 13,047 registration records in a 'Granted, Not Constructed' status in the Antenna Structure Registration (ASR) database. This includes both towers registered to licensees and towers registered to non-licensee tower owners. The Commission does not keep information from which we can easily determine how many of these towers are registered to non-licensees or how many non-licensees have registered towers.[22] Regarding towers that do not require antenna structure registration, we do not collect information as to the number of such towers in use and therefore cannot estimate the number of tower owners who would be subject to the proposed new rules. Moreover, the SBA has not developed a size standard for small

[15] http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517210&search=2007%20NAICS%20Search

[16] 13 C.F.R. § 121.201, NAICS code 517210.

[17] 13 C.F.R. § 121.201, NAICS code 517210. The now-superseded, pre-2007 C.F.R. citations were 13 C.F.R. § 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

[18] U.S. Census Bureau, Subject Series: Information, Table 5, "Establishment and Firm Size: Employment Size of Firms for the United States: 2007 NAICS Code 517210" (issued Nov. 2010).

[19] *Id.* Available census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "100 employees or more."

[20] *See* http://factfinder.census.gov/servlet/IBQTable?_bm=y&-fds_name=EC0700A1&-geo_id=&-_skip=600&-ds_name=EC0751SSSZ5&-_lang=en

[21] 47 C.F.R. §§ 17.4(a), 17.7(a).

[22] We note, however, that approximately 13,000 towers are registered to 10 cellular carriers with 1,000 or more employees.

businesses in the category "Tower Owners." Therefore, we are unable to estimate the number of non-licensee tower owners that are small entities. We assume, however, that nearly all non-licensee tower companies are small businesses under the SBA's definition for cellular and other wireless telecommunications services.[23]

11. **Radio Broadcasting**. The policies adopted in the *Third Report and Order* apply to radio broadcast licensees, and potential licensees of radio service. The SBA defines a radio broadcast station as a small business if such station has no more than $7 million in annual receipts.[24] Business concerns included in this industry are those primarily engaged in broadcasting aural programs by radio to the public.[25] According to Commission staff review of the BIA Publications, Inc. Master Access Radio Analyzer Database on as of January 31, 2011, about 10,820 (97 percent) of 11,100 commercial radio stations) have revenues of $7 million or less and thus qualify as small entities under the SBA definition. We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations[26] must be included. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies.

12. In addition, an element of the definition of "small business" is that the entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific radio station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply do not exclude any radio station from the definition of a small business on this basis and therefore may be over-inclusive to that extent. Also as noted, an additional element of the definition of "small business" is that the entity must be independently owned and operated. We note that it is difficult at times to assess these criteria in the context of media entities and our estimates of small businesses to which they apply may be over-inclusive to this extent.

13. **FM Translator Stations and Low Power FM Stations.** The new rules apply to licensees of FM translator and booster stations and low power FM (LPFM) stations, as well as to potential licensees in these radio services. The same SBA definition that applies to radio broadcast licensees would apply to these stations. The SBA defines a radio broadcast station as a small business if such station has no more than $7.0 million in annual receipts.[27] Currently, there are approximately 6,105 licensed FM translator and booster stations and 824 licensed LPFM stations.[28] Given the nature of these services, we will presume that all of these licensees qualify as small entities under the SBA definition.

14. **Television Broadcasting.** The SBA defines a television broadcasting station as a small business if such station has no more than $14.0 million in annual receipts.[29] Business concerns included in

[23] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517212. Under this category, a business is small if it has 1,500 or fewer employees.

[24] *See* 13 C.F.R. § 121.201, NAICS Code 515112.

[25] *Id.*

[26] "[Business concerns] are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has to power to control both." 13 C.F.R. § 121.103(a)(1).

[27] *See* 13 C.F.R. § 121.201, NAICS Code 515112.

[28] *See News Release*, "Broadcast Station Totals as of December 31, 2007" (rel. March 18, 2008) ("*Broadcast Station Totals*") (http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-280836A1.doc).

[29] *See* 13 C.F.R. § 121.201, NAICS Code 515120 (2007).

this industry are those "primarily engaged in broadcasting images together with sound."[30] The Commission has estimated the number of licensed commercial television stations to be 1,995.[31] According to Commission staff review of the BIA Kelsey Inc. Media Access Pro Television Database (BIA) as of January 31, 2011, 1,006 (or about 78 percent) of an estimated 1,298 commercial television stations[32] in the United States have revenues of $14 million or less and, thus, qualify as small entities under the SBA definition. The Commission has estimated the number of licensed noncommercial educational ("NCE") television stations to be 396.[33] We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations[34] must be included. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. The Commission does not compile and otherwise does not have access to information on the revenue of NCE stations that would permit it to determine how many such stations would qualify as small entities.

15. In addition, an element of the definition of "small business" is that the entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific television station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply do not exclude any television station from the definition of a small business on this basis and are therefore over-inclusive to that extent. Also, as noted, an additional element of the definition of "small business" is that the entity must be independently owned and operated. We note that it is difficult at times to assess these criteria in the context of media entities and our estimates of small businesses to which they apply may be over-inclusive to this extent.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

16. The *Third Report and Order* establishes a single protection scheme for tower construction near AM tower arrays and designates "moment method" computer modeling as the principal means of determining whether a nearby tower affects an AM radiation pattern. Overall, the changes we are adopting are designed to simplify the requirements of the existing rules and reduce the time and expense required to determine the impact of nearby tower construction or significant modification on affected AM stations. Specifically, although the new rules require modest engineering analysis, the use of computer modeling is less onerous, time consuming, and costly than the existing proof of performance requirements. By eliminating short towers from consideration and excluding many routine cases in which antennas are added to existing towers, the new rules reduce the regulatory burdens. The new rules will modify and reduce the

[30] *Id*. This category description continues, "These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public. These establishments also produce or transmit visual programming to affiliated broadcast television stations, which in turn broadcast the programs to the public on a predetermined schedule. Programming may originate in their own studios, from an affiliated network, or from external sources." Separate census categories pertain to businesses primarily engaged in producing programming. *See* Motion Picture and Video Production, NAICS code 512110; Motion Picture and Video Distribution, NAICS Code 512120; Teleproduction and Other Post-Production Services, NAICS Code 512191; and Other Motion Picture and Video Industries, NAICS Code 512199.

[31] *See Broadcast Station Totals, supra* note 28.

[32] We recognize that this total differs slightly from that contained in *Broadcast Station Totals, supra*, note 28; however, we are using BIA's estimate for purposes of this revenue comparison.

[33] *See Broadcast Station Totals, supra*, note 28.

[34] "[Business concerns] are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has to power to control both." 13 C.F.R. § 121.103(a)(1).

overall reporting, recordkeeping, and compliance requirements of tower proponents and AM station licensees and permittees. The requirements, detailed below, will affect small and large companies equally.

17. The new rules require a party proposing to construct a new tower or significantly modify an existing tower within the pertinent critical distance (the "tower proponent") to provide notice to the AM station at least 30 days prior to the planned commencement of construction. The notification must include the following information: (1) the tower proponent's name and address; (2) coordinates of the tower to be constructed or modified; (3) physical description of the planned construction; and (4) results of the analysis showing the predicted effect on the AM pattern, if performed. Responses to a notification must specify the technical details and be provided to the tower proponent within 30 days.

18. The rules designate moment method modeling as the principal means of determining whether a nearby tower affects an AM pattern. The rules, however, allow traditional "partial proof" measurements taken before and after tower construction as an alternative procedure when the potentially affected AM station was licensed pursuant to field strength measurements, as opposed to computer modeling. The tower proponent is responsible for the installation and maintenance of any detuning apparatus necessary to restore the AM station's radiation pattern.

19. The new rules permit AM stations to submit a showing that tower construction not otherwise subject to the notice and remediation requirements has affected the AM station operations. The showing must consist of either a moment method analysis or field strength measurements and be provided to the tower proponent or owner and to the Commission either (1) within two years after the date of completion of the tower construction or modification, or (2) in the case of operation adversely affected by tower construction or alteration that occurred prior to the effective date of the new rules, within one year of the effective date of the new rules. The Commission, if necessary, can direct the tower proponent or owner to install and maintain any detuning apparatus necessary to restore proper operation of the AM antenna.

20. AM station licensees will continue to be required to file FCC Form 302-AM before or simultaneously with any license application associated with installations on the AM antenna or within 30 days after the completion of the installation.[35]

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

21. The RFA requires an agency to describe any significant alternatives that might minimize any significant impact on small entities. Such alternatives 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) an exemption from coverage of the rule, or any part thereof, for small entities.[36]

22. As noted, we are directed under law to describe any such alternatives we consider, including alternatives not explicitly listed above.[37] In the *Third Report and Order*, the Commission revised certain provisions of the proposed rules set forth in the *Second Further Notice* in response to concerns expressed

[35] *See* New Section 1.30003 of the Rules.

[36] 5 U.S.C. § 603(c).

[37] 5 U.S.C. § 603(b).

by commenters, several of whom represent small entities. We believe that the new rules will reduce the compliance burden on most Commission licensees, and that this reduction will be particularly beneficial to small entities.

23. Specifically, the *Second Further Notice* proposed to cover circumstances that would be otherwise excluded from the AM proximity rules. For example, there may be circumstances in which a tower more than 3 kilometers away may affect a directional AM station. Similarly, a short tower that would be otherwise excluded from study may affect an AM station if it is very close, *i.e.*, within the near field of the AM antenna. Commenters, including small entities, were divided on this issue. According to Waterford Consultants, "the proposed rules leave the tower proponents' responsibilities open-ended." Waterford asserted that tower proponents need to have their financial obligations clearly defined from the outset.[38] Greater Media supported the rule provision, stating that "there are no absolutes in such situations."[39] The Joint Commenters supported the rule provision with modifications. They advocated defining the type of analysis that would constitute a credible showing that the tower construction has affected the AM station. In particular, the Joint Commenters recommended that the AM station must supply either a moment method analysis or field strength measurements to support its claim. The tower proponent, according to the Joint Commenters, should be afforded an opportunity to respond to the AM station's showing of adverse impact. Finally, the Joint Commenters proposed that the rule include a two-year time limit within which the AM station must make a claim of adverse impact.[40]

24. We adopted the rule provision in Section 1.30002(g) addressing tower construction otherwise excluded, with certain modifications. We felt that defining the type of showing required from an AM station and requiring the AM station to share the study with the tower proponent, as the Joint Commenters suggest, would facilitate resolution of possible problems. We also acknowledged the burden of potentially open-ended financial obligations, which would affect small entities. We therefore required that showings of adverse impact under this rule section be made within two years of the date of the tower construction or significant modification.

25. We believe that the rule provision discussed above offers significant benefits to small entities. It facilitates conflict resolution between the parties, which allows small entities to resolve issues on a grassroots level. We believe it adopts a more economically advantageous method of conflict resolution because it is likely to be faster, more informal, and may avoid the time and expense of hiring legal or technical counsel. The new rule also limits the time frame in which showings of adverse impact can be made, which benefits small entities because it avoids open-ended financial obligations. Lastly, the rule gives examples of appropriate showings required from an AM station. Such examples give predictability and allow small entities to plan, which can help limit the economic impact of making an adverse impact showing. Accordingly, by adopting policies that are more specific, including examples and a time line, the Commission adopted a rule that imposes a substantially less significant economic impact.

F. Federal Rules that May Duplicate, Overlap, or Conflict With the Proposed Rules

26. None.

[38] *See* Comments of Waterford at 5.

[39] *See* Comments of Greater Media at 3.

[40] *See* Joint Comments at 6.