

BEFORE THE
Federal Communications Commission
WASHINGTON, D.C. 20554

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

REPLY COMMENTS

**AM DIRECTIONAL ANTENNA PERFORMANCE VERIFICATION COALITION
THE LAND MOBILE COMMUNICATIONS COUNCIL
THE WIRELESS COMMUNICATIONS ASSOCIATION INTERNATIONAL, INC.**

The AM Directional Antenna Performance Verification Coalition¹ (the “Coalition”), the Land Mobile Communications Council² (“LMCC”) and the Wireless Communications Association International, Inc.³ (“WCAI”) (collectively, the “Joint Commenters”) hereby jointly reply to certain comments filed in response to the Commission’s Second Further Notice of Proposed Rule Making (“Second Further Notice”) in the above-captioned proceeding.

¹ The Coalition consists of the broadcasters, broadcast engineering consultants, and broadcast equipment manufacturers identified on Attachment A.

² LMCC is a non-profit association of organizations representing virtually all users of land mobile radio systems, providers of land mobile services, and manufacturers of land mobile radio equipment. LMCC acts with the consensus, and on behalf, of the vast majority of public safety, business, industrial, transportation and private commercial radio users, as well as a diversity of land mobile service providers and equipment manufacturers.

³ WCAI is an international, nonprofit, technology-neutral trade association whose members comprise the wireless broadband ecosystem. WCAI represents service providers, equipment manufacturers, application developers and other contributors to the wireless broadband industry.

I. The Commission Should Retain The Electrical Height And Pattern Distortion Thresholds Proposed For Non-Directional AM Antenna Systems.

Greater Media, Inc. (“Greater Media”) suggests that the threshold height for analysis of towers erected in the vicinity of non-directional AM antenna systems should be reduced from 60 electrical degrees to 36 electrical degrees, which is the same threshold height proposed for directional antennas. Greater Media Comments at 2-3. Greater Media’s concern appears to stem from its belief that the proposed +/- 2 dB pattern distortion threshold for non-directional antenna systems is excessive. *Id.* The Joint Commenters respectfully disagree.

The Commission has in many instances accepted non-directional radiation patterns with +/- 2 dB of non-circularity (and occasionally even more) in support of AM directional antenna proofs of performance. Indeed, +/- 2 dB circularity is a routine specification for VHF and UHF non-directional patterns. The Joint Commenters do not believe that a reduction of the electrical height threshold to 36 degrees or the adoption of a +/- 1 dB pattern distortion threshold for non-directional antenna systems is warranted.

II. The New AM Proximity Rules Are Designed To Predict Pattern Distortions Using Moment Method Analysis.

Greater Media also raises concerns over a potential scenario whereby a newly constructed tower or structure is shown by moment method modeling to not adversely affect a nearby AM station’s directional antenna pattern but post-construction measurements nevertheless reveal that a station monitor point exceeds its licensed value. Greater Media Comments at 4-5. While the Joint Commenters acknowledge that such scenarios are possible, if not likely, the purpose of the new AM proximity rules under Part 1, like the rules they are intended to replace, is to predict actual distortions to AM

patterns.

It is not at all unusual for a monitor point of an existing antenna array to exceed the originally established limit, which can result from fairly insignificant changes in the environment in the vicinity of the monitor point or from re-radiation from a newly erected structure. In the latter instance, it is nearly always possible to identify the re-radiating structure. The effects of a nearby re-radiator may be localized (meaning that it has no effect on the AM station's far-field pattern), but even if they are not, measurements on the radial, and if necessary directional measurements that are ratioed with non-directional measurements will allow the effects of a modest re-radiator to be characterized and a new monitor point or a higher limit on an existing point to be established. The necessary data can be obtained very simply and Commission staff processes the data and grants very quickly corresponding requests for Special Temporary Authority ("STA") to operate with parameters at variance while maintaining monitor points within licensed values.

Although the Joint Commenters respectfully disagree that the possibility that such scenarios may arise is an indication that the proposed rules are somehow inadequate, Greater Media nevertheless has raised an important issue that the Commission can effectively address in this proceeding. Under current Commission procedures, when a station determines that a monitor point is out of tolerance it must promptly reduce power and obtain an STA to operate at reduced power/facilities at variance while maintaining monitor points within licensed limits. The station cannot resume full power operation until a modified license has been granted that either changes the location of the affected monitor point or increases the affected monitor point's value. The processing of such an

application is sometimes a lengthy process. The Joint Commenters believe that the Commission should relieve AM stations of the unnecessary burden of operating at reduced power if the AM station can demonstrate that the out-of-tolerance monitor point is merely an isolated problem. Specifically, if a partial proof of performance of the affected radial demonstrates that the directional AM station's pattern has not been adversely affected, the Commission should permit the AM station to obtain an STA to operate at *full power* while its application for a modified license is pending.

The Joint Commenters also acknowledge that under proposed Section 1.30002(b), any single potential radiator will be deemed compliant as long as its contribution does not cause the directional pattern to exceed the standard or augmented pattern values, and that a single radiator can conceivably consume all of the headroom at the monitor point and/or radial. Greater Media Comments at 5. However, the same can be said with respect to the Commission's existing rules (*i.e.*, the "last in" user becomes responsible for necessary amelioration), and the Joint Commenters are not aware of any regulatory solution to this long-standing issue.

III. The Commission Should Not Mandate The Use Of Conventional Techniques and Measures For Stations That Have Not Converted To Internally Monitored Arrays.

The Joint Commenters respectfully disagree with Greater Media's suggestion that AM stations that were authorized pursuant to a directional proof of performance and that have not converted to internally monitored arrays should be analyzed only using conventional techniques and measurements. Greater Media Comments at 5-6. Section 22.371 and Section 27.63, for example, only require that undefined "measurements" be taken to ascertain any possible adverse effect, and in practice nearly all such

measurements are made only on the monitor points. Similarly, while Section 73.1692 requires a partial proof of performance (although not necessarily using the same measurement points as the original proof of performance), Commission staff has practically since its adoption routinely waived the rule's requirements in trivial cases or where a worst case, no loss moment method analysis shows no or minimal effect. For these reasons, the Joint Commenters submit that a moment method analysis, as defined in the proposed §1.30002, provides for a far more effective and reliable determination of the potential for re-radiation of a proposed tower or structure than is possible under the current rules.

IV. Tower Proponents Should Generally Provide Potentially Affected AM Stations 30 Days Prior Notice Of Any Construction or Significant Modification of Tower.

In their earlier filed comments in this proceeding, the Joint Commenters expressed their general support for the Commission's proposal that tower proponents provide potentially affected AM stations with at least 30 days prior notice of any construction or significant modification of a tower in the immediate vicinity of the AM station so that its licensee has a reasonable opportunity to perform its own assessment of the impact of the planned construction. However, the Joint Commenters proposed more detailed notice provisions to ensure that AM stations are provided adequate information to perform that assessment, and suggested that the new rules should accommodate, where possible, a tower proponent's request for clearance of a construction project within less than 30 days. Joint Comments at 5-6.

Two commenters have asked the Commission to change the amount of notice to be afforded to AM stations. Waterford Consultants, LLC ("Waterford") states that 30

days prior notice is excessive and that construction should be permitted “with essentially little or no pre-notice.” Waterford Comments at 3. In contrast, Greater Media requests that the rules provide for a minimum of 120 days prior notice. Greater Media Comments at 4. The Joint Commenters believe their effort to clarify and augment the general 30 day notice requirement, combined with their suggestion that tower proponents be able to request expedited approval of urgent tower projects, represents a reasonable compromise between these two competing positions.

V. Additional Actions That Will Facilitate Compliance And Ease Regulatory Burdens on Affected Entities.

Finally, the Joint Commenters also wish to address several additional issues that while not specifically raised in comments in this proceeding nevertheless merit Commission action:

► The Joint Commenters believe that the new AM proximity rules should incorporate a narrow but important exception to the prior notice requirement to address urgent but temporary communications needs in the event of an emergency situation.

Toward that end, the Joint Commenters urge the adoption of the following new subsection (e) to its proposed Part 1.30004 (Notice of tower construction or modification near AM stations):

(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 erection 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.

► Proposed Section 1.30002(f) permits the use of field strength measurements in lieu of computer modeling to demonstrate that a new or modified tower does not adversely affect an AM station authorized pursuant to a directional proof of performance. In order for tower proponents to more easily identify those stations for purposes of compliance with the new rules, the Joint Commenters request that the Commission incorporate into its CDBS database a method of distinguishing between stations authorized using field strength measurements and those licensed using computer modeling – such as a unique FCC file number prefix for computer modeled stations.

► The Joint Commenters are confident that computer modeling will predict the potential effects of tower construction on AM stations more accurately than can be achieved by field strength measurements, and believe that in time will demonstrate that many existing towers that have been detuned to protect nearby AM stations do not in fact adversely affect the patterns of such stations. Indeed, the Joint Commenters submit that in some instances AM station pattern distortion may be the result of improperly maintained or damaged detuning networks that have been unnecessarily installed. To ameliorate this situation, the Joint Commenters request that the Commission permit a tower owner to remove a detuning network from an existing tower where a moment method analysis demonstrates no adverse impact on the AM station the detuning network is designed to protect, and the licensee of that AM station agrees in writing to the removal of that detuning network.

Respectfully submitted,

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ATTACHMENT A

AM DIRECTIONAL ANTENNA PERFORMANCE VERIFICATION COALITION

Broadcasters

Beasley Broadcasting Group
Bonneville International
Buckley Radio
CBS Radio Inc.
Citadel Broadcasting Company
Clear Channel Radio
Cox Radio, Inc.
Crawford Broadcasting Company
Cumulus Media
Emmis Communications Corp.
Entercom Communications Corp.
Entravision Communications Corporation
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
Communications Technologies, Inc.
DuTreil, Lundin & Rackley
Edward A. Schober, P.E., Radiotechniques Engineering, LLC
Graham Brock, Inc.
Hammett & Edison, Inc.
Hatfield & Dawson Consulting Engineers, LLC
Khanna & Guill, Inc.
Sellmeyer Engineering