Hammett & Edison, Inc.
Consulting Engineers

Comments to MM Docket 99-292
New Class A TV Service

December 21, 1999

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Establishment of a Class A Television Service	)	MM Docket No. 99-292
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To: The Commission

Comments of Hammett & Edison, Inc.

The firm of Hammett & Edison, Inc., Consulting Engineers, respectfully submits these comments in the above-captioned proceeding relating to Class A Television stations. Hammett & Edison, Inc. is a professional service organization that provides consultation to commercial and governmental clients on communications, radio, television, and related engineering matters.

I. Qualifications of Hammett & Edison, Inc.

1. Hammett & Edison, Inc. is well qualified to make comments on this matter, having prepared hundreds of TV, DTV, TV Translator, and LPTV applications. Further, Hammett & Edison has been closely involved in the MM Docket 87-268 DTV rulemaking[1] and in the MM Docket 93-114 rulemaking updating the LPTV Rules.

II. Community Broadcasters Protection Act of 1999

2. The November 29, 1999, adoption of the Community Broadcasters Protection Act of 1999 ("CBPA"), Section 5008 to Senate Bill 1948, makes many of the issues raised in the September 22, 1999, Notice of Proposed Rule Making ("NPRM") moot. For that reason, on December 14, 1999, the Commission issued an Order suspending the December 21, 1999, Docket 99-292 deadline "until further notice." Nevertheless, we are filing these instant comments under the original filing deadline because we believe that there are certain, urgent

[1] Indeed, on August 26, 1999, Hammett & Edison filed 34 pages of Biennial Review comments to MM Docket 87-268, pointing out certain technical shortcomings and inconsistencies discovered in two years experience using OET-69 methodology in the preparation of DTV, NTSC, and TV Translator/LPTV applications.

issues that the Commission needs to immediately resolve before interested parties can comply with certain provisions of the CBPA.

III. Defective Certification of Eligibility Form Proposed by CBA

3. Examination of the Community Broadcasters Association ("CBA") web page, www.communitybroadcasters.com, reveals that it has drafted a proposed "Class A Certification of Eligibility" form ("COE"). However, we believe that the proposed form is deficient because it does not include the showing specified in CBPA Section (f)(7), namely that the Class A station for which the license or modification is sought will not cause interference within the predicted Grade B contour of any full-service NTSC analog TV station, or to the "service area" of a DTV station. Interestingly, the CBPA language imposes a more rigorous protection criteria to full-service DTV stations than is now required by the Commission, in that current Commission policy requires only the protection of DTV construction permits or licenses, and not as-yet unbuilt DTV allotments. In contrast, the CBPA requires a showing that a proposed Class A TV station protects all DTV allotments, *i.e.*, the "service areas provided in the DTV Table of Allotments," not just DTV permits and licenses. This more rigorous protection criterion is appropriate, since it is the same criterion required of full-service NTSC stations seeking to modify their facilities; that is, if LPTV stations want the benefit of primary status, then they should be obligated to protect DTV allotments, as well as actual DTV stations, just as modifying full-service NTSC stations must do.

4. Hammett & Edison therefore concludes that any Class A Certification of Eligibility that the Commission adopts as mandated by the CBPA must include an engineering showing of protection of all NTSC facilities applied for, authorized, or in existence as of November 29, 1999, and all DTV allotments, permits, and licenses in existence as of December 31, 1999.

5. Hammett & Edison proposes that a Class A applicant showing no interference to full-service TV stations be allowed to demonstrate either that the Class A facility meets the spacing requirements specified in Section 73.623(d)(2) of the FCC Rules (that is, the post-transition period transmitter-to-transmitter spacings required for between full-service TV stations) or that the Class A facility meets the protection criteria of an OET-69 style interference study. The Commission needs to clarify whether LPTV stations that cannot demonstrate the required transmitter-to-transmitter spacing, and must therefore use OET-69 methodologies, have to meet the present "zero population" criterion, or whether such stations will be allowed the more lenient <0.5% *de minimus* interference permitted for full-

service NTSC stations making minor-change modifications. CBPA Section 5008(1)(A)(ii) requires upgrading LPTV stations to "continue to meet" the "requirements" now imposed, but it is unclear whether the Act was referring to the zero population criteria for secondary TV Translator/LPTV stations or to the <0.5% *de minimus* interference level that modifying full-service NTSC stations are permitted.

IV. December 31, 1999, Notification Deadline for Full-Service DTV Stations

6. According to the Commission's December 7, 1999, Public Notice "Community Broadcasters Protection Act of 1999 Sets Deadline of December 31, 1999, for Full Service TV Stations to File Letters of Intent to Maximize Their DTV Facilities," Class A stations will NOT be protected from DTV applications seeking to maximize their service area, but only if the full-service DTV station has filed a timely (*i.e.*, by December 31, 1999) notice of intent to maximize, and only if the actual maximization application is then filed by May 1, 2000.

7. Part of the consideration for a full-service DTV station deciding whether to submit a notice and a maximization application is whether there are any existing LPTV stations near its service area that may have a precluding effect if granted Class A status. But there is no reliable way for full-service TV licensees to determine whether a low power TV station is operating as a TV Translator station or as an LPTV station, because LPTV licensees are not required to convert to a lettered call sign with a "-LP" suffix[2] and because the FCC file numbering conventions are not reliably followed. Although once an LPTV station desiring Class A status files a COE, making it clear that the station is an LPTV and not a TV Translator, the deadline for that filing does not occur until a month after the deadline for DTV stations to file their notices of intent. Therefore, full-service DTV stations are virtually forced to file such notices if there is any potentially precluding TV Translator or LPTV station in the vicinity of the full-service DTV stations' potentially maximized coverage areas, as the December 31, 1999, deadline is simply too short to allow time for the detailed engineering studies necessary to determine whether a nearby TV Translators or LPTV stations will have a precluding effect on potentially maximized DTV facilities. In this regard, we note that the precluding effect applies to more than just co-channel and first-adjacent channel LPTV stations; the preclusions would also apply to LPTV stations that have a taboo channel relationship with the full-service DTV channel, because of the new obligation for full-service DTV stations to protect what were previously secondary LPTV facilities.

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[2] The June 2, 1994, First R&O to MM Docket 93-114 authorized LPTV stations lettered call signs with "-LP" suffixes.

8. Fortunately, the CBPA does not include any penalty for full-service DTV stations that file notices of intent but then decide not to file a DTV maximization application. We would request that the Commission clarify this, but the R&O in this matter will almost certainly be released *after* the deadline for filing notices.

9. We assume that a full-service NTSC station that wants to modify its facilities, or a modifying DTV station that has not filed timely either a notice of intent to maximize or the anticipated application, will be allowed to make modifications that cause no more than 2% *de minimus* new interference to now protected Class A stations. We request that the Commission confirm this assumption in its R&O in this proceeding. The Commission also needs to clarify whether a 10% overall interference cap will apply to Class A stations and, if so, what "baseline" population is to be used for calculating the 10% cap, as no LPTV stations were included in Appendix B to the final R&O in Docket 87-268.

V. CBPA Reduction in Protection for Interim DTV Facilities

10. CBPA Section 5008(f)(1)(E) states that "[i]f a station that is awarded a construction permit to maximize or significantly enhance its digital television service area, later files a change application to reduce its digital television service area, the protected contour of that station shall be reduced in accordance with such change modification." In certain situations this would appear to require the Commission to no longer protect a DTV allotment, but rather only protect actual, applied-for facilities. For example, a DTV station might apply for maximized facilities, receive a grant, but then be unable to build due to local zoning problems that were not foreseen at the time the maximization application was submitted.[3] As an interim measure, the station could then file for lesser facilities (that nevertheless still provide full coverage to its community of license, of course), perhaps at a downtown studio location, in the expectation that allotment or even maximized DTV facilities would eventually be built. But the CBPA would appear to require that the Commission no longer protect the allotment, as is now the case. Therefore, although a maximizing full-service DTV station has to protect DTV applications, DTV allotments, and DTV allotments hypothetically increased to 200 kW if the maximization application requests an ERP in excess of 200 kW, it would appear that LPTV stations upgrading to Class A status now have the Congressionally-mandated right to "lock in" a full-service DTV station that, for whatever reason, must temporarily request an interim DTV facility.

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[3] This scenario may apply for several Denver, Colorado, DTV stations, and may be common elsewhere, as well.

11. If, in fact, the Commission agrees with this reading of the CBPA, it should so state in its R&O in this proceeding, so that full-service DTV stations that might have otherwise applied for interim, low-power DTV facilities will be warned that doing so may allow a previously secondary LPTV station to file for Class A status that would preclude the full-service DTV station from ever building maximized facilities. If, however, the Commission does not intend to penalize DTV stations having difficulty constructing their allotted facilities initially, it should indicate in its R&O in this proceeding that it will entertain requests for STA in such situations.

VI. Correct ERP for Class A TV Interference Studies

12. Footnote 5 to FCC Form 346 ("Application for Authority to Construct or Make Changes in a Low Power TV, TV Translator, or TV Booster Station") indicates that the antenna gain to be specified is the gain towards the radio horizon. For LPTV stations employing high-gain antennas with narrow elevation patterns and electrical beam tilt, there can be a significant difference between the station's ERP at the radio horizon and its main beam ERP, a difference that can exceed 10 dB.[4]

13. In light of the sophisticated analysis tools now available to the Commission, use of which the Commission has mandated for full-service TV applicants, it is important to avoid incorporating a procedural artifact from the methods used in the past to process applications for Part 74, secondary services. This can easily and simply be accomplished by stipulating that, for purposes of the interference study required as part of the certification for Class A status, the main beam ERP must be used, as opposed to the ERP at the radio horizon, and it is imperative that the Commission so stipulate in its R&O in this proceeding.

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[4] It should be noted that this problem was pointed out in the June 1, 1993, H&E comments to MM Docket 93-114. The consulting firm of du Treil, Lundin & Rackley, Inc. ("dLR") independently filed similar comments pointing out the radio horizon versus main beam problem. However, the June 2, 1994, First Report and Order to MM Docket 93-114 ignored this issue, on the grounds that the matter was supposedly outside the scope of the NPRM (R&O, at Page 13, Footnote 41). We continue to believe that the H&E and dLR comments were within the scope of the NPRM, which was a "review of the Commission's Rules Governing the Low Power Television Service." Accordingly, on June 29, 1994, H&E timely filed a Petition for Reconsideration, as did dLR. To date, there has been no action on these Petitions.

V. Canadian and Mexican Considerations

14. The CBPA is silent on the issue of Class A stations in the border areas. The Commission needs to clarify whether Class A stations will be permitted within 400 kilometers of the Canadian border[5] and/or within 320 kilometers of the Mexican border[6] and, if so, what additional requirements, if any, such stations will be obligated to meet before being awarded Class A status.

Respectfully submitted,

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December 21, 1999

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5 The January 5, 1994, U.S.-Canada TV Agreement applies to TV stations within 400 km of the U.S.-Canada border. The Agreement bases its treatment of LPTV stations on both distance and the extent of the LPTV station's F(50,10) interfering contour.

6 The U.S.-Mexico Television Agreement generally applies to stations within 320 km (199 miles) of the U.S.-Mexico border. However, and pursuant to the September 14, 1988, and November 21, 1988, amendments to the Agreement, LPTV stations meeting certain power/height restrictions are exempt from notification.