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

In the Matter of)
)
Petition to Amend Title 47 of the) RM-11559
Code of Federal Regulations Part 73.99)
Concerning Pre-sunrise Service)
Authorizations for Class D Stations in the AM)
Broadcast Service)

Reply Comments of Edward A. Schober, PE

1. Edward A. Schober, is a licensed professional engineer employed by Radiotechniques Engineering LLC, a New Jersey limited liability company that provides engineering services to broadcasting stations. Mr. Schober has over thirty years experience in advising broadcast radio station clients in areas of RF engineering, station design, FCC technical representation and propagation studies. Many of these stations are AM facilities. Mr Schober is also an applicant for a new AM station in Enola, PA. Mr Schober is a member of the AFCCE, and a senior member of the IEEE and SBE. Mr Schober's contact information is:

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2. I have reviewed the subject petition and agree with the compelling argument that local AM service beginning at 05:00 AM is critical to the continued viability of AM broadcasting and to provide essential safety information in the morning hours. It should be permitted wherever it is of benefit to AM broadcasting as a whole.

3. This proposal should be considered as part of a larger review of Pre-sunrise and Post-sunset operation of AM stations. As such I request that the Federal Communications Commission consolidate RM-11559 with the more extensive proposals made in RM-11384, pending since April 5, 2007. RM-11384 has received many comments, uniformly in favor of the proposal. By considering these proposals together the Commission will be able to improve the viability of not only Class D stations, but all AM stations with weak or non-existent night signals.

4. Although I agree with the basic premise of the proposal in RM 11559, there are two aspects of the RM11384 proposal which is problematic, and one area that I believe the proposal is too

restrictive.

5. First: Establishing that the service beginning at 5:00 AM and extending until 10:00 AM are the most precious hours of the broadcast day, any changes to the the Pre-Sunrise authorization (PSRA) rules must assure that the improvement in stations using PSRA does not severely negatively effect the regular local operation of other class B (and potentially class A) stations sharing the band. The service of these stations is equally crucial during this period. If it is determined that some degradation to the service areas of class B stations is permissible, the public interest requires that the public benefit of improvement in the gaining station must outweigh the public value of the any loss in the service area of stations with regular night operations. A special weight might be applied if the station seeking PSRA is the first station in its principal community, and can actually serve a reasonable proportion of that community with its PSRA facility. Appendix A is a brief technical analysis of this consideration. From the analysis of these two cases, it appears that a blanket PSRA of 500 Watts beginning at 05:00 AM is not be justified. The benefit to be gained by early PSRA operations must be balanced against the disruption of service that these signals may cause. I believe that an across the board extension of PSRA authorizations at 500 Watts would be counterproductive. Computer analysis of acceptable power levels is practicable for station by station analysis and authorization.

6. Second: *The Agreement between the Government of the United States of America and the Government of Canada relating to the AM Broadcasting Service in the Medium Frequency Band* specifies that the Extended hours begin at 06:00AM and end at two hours past sunset, local time. This agreement would require amendment to effect the change proposed in RM-11559 unless full protection of all Canadian night allocations are afforded and PSRA operations commencing before 06:00 AM notified to Canada. *The AM Agreement between the United States and Mexico of 1986* specifies that extended hours begins at two hours before sunrise and ends at two hours after sunset. To comply with this agreement, full protection would be required to all Mexican night allocations and notification were effected for all operations where sunrise is later than 07:00 AM. These conflicts with international agreements must be resolved before the proposal of RM-11559 can be implemented.

7. The proposal of RM-11559 recommends that eligibility for 05:00 AM PSRA be limited to Class D stations on regional channels. The petitioner, apparently seeking to simplify the proceeding and address the specific requirement of the fact that most class D stations have no night operation, or severely limited night operation. There are, however, many class B AM stations whose night power is less than 500 Watts or whatever the PSRA power might be. These stations, using their directive night antenna at higher power (See RM-11384) are likely to provide much better service beginning at 05:00 AM than the normal night operation, while causing negligible interference to other stations. Additionally, Class B stations with low power night operations might be able to compensate for increased interference from PSRA operations of other stations by operating at higher power using their night antennas at PSRA power, while still effectively protecting other stations on the channel.

8. The comments on file at the FCC ECFS System in RM-11559 and RM11384 appear to be uniformly in favor of the proposals, indicating that both proposals are important to the continued success

of AM broadcasting. I urge the Federal Communications Commission to move forward promptly with the rulemaking process to address the critical need of AM broadcasters to provide service during extended hours wherever practical.

9. In summary, I recommend extending PSRA authorizations to 05:00 AM when the benefits of PSRA service outweigh the loss of service elsewhere. I recommend that PSRA authorizations also be extended to 05:00 AM for both Class B stations and Class D stations on both regional and clear channels when they will cause little or no interference to other station's groundwave service. I believe that this proposal will require fine tuning our bilateral agreements with Mexico and Canada, and I recommend that RM-11559 be consolidated with RM-11384, and proceed to a Notice of Rulemaking or Notice of Inquiry at the earliest possible time.

Respectfully submitted,

A handwritten signature in blue ink that reads "Edward A. Schober". The signature is written in a cursive, flowing style.

Edward A. Schober, PE

5 May 2010

Attachment:

Interference study.

I certify that a copy of this Reply Comment has been sent to the petitioner by first class mail at the address below:

Richard F. Arsenault
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Attachment 1 Page 1
Sample Interference study

This sample interference study examines the case of two 1000 Watt non-directional daytime AM stations channels operating with 500 Watts between 05:00 and 06:00 AM and their effect on other stations on the same channel. The study includes those stations for which the 500 Watt operation enters the 50% night limit of that station. The study is based upon full night propagation, as the Diurnal Curves provide no adjustment for T=SR-1.25 hrs for frequencies above 850 kHz. Where the existing Night Interference Free contour is below 5.0 mV/m, the value of 5.0 mV/m was used. Sunrise for all stations is later than 06:15 AM for much of the year. The stations were chosen to be illustrative examples and not intended to be exhaustive in nature.

Test Station 1: WYLF, Penn Yan, NY 850 kHz, 1 kW-D, 0.045 kW-N – ND Night limit 44.43 mV/m
 Existing Night Facility - 4.9 sq km 147 persons
 500 Watt PSRA Coverage– 41.9 sq km 1175 persons
 Coverage gain: 37.0 sq km 1028 persons

Effected Stations Night operation:

Station	Present NIF	Present Population	NIF w/ WYLF	Pop with WYLF	Pop Loss
WEEL, Boston, MA 50 kW N – DA	5.0 mV/m	3167380	6.030 mV/m	2955574	211806
WKGE, Johnstown, PA 10 kW- N DA	14.89 mV/m	93617	16.51 mV/m	91949	1668
WKNR, Cleveland, OH 4.7 kW-N DA	10.29 mV/m	1245222	11.60 mV/m	1178577	66645
Total Loss					280119

Net population - Decrease of 279091 persons Efficiency (Gain/Loss of population) 0.0037

January, February, March, November and December, and during DST March, April, August, September and October have no benefit of the diurnal factor at 05:00 AM for this station, excepting WEEL, Boston, which is located east of WYLF.

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Sample Interference study

Second Example Station

WBAG, Burlington, NC - 1150 kHz, 1 kW-D, 0.048 kW-N – ND Night Limit 16.49 mV/m

Existing Night Facility: 24.9 sq km 15899 persons

500 Watt PSRA Coverage: 133.9 sq km 60836 persons

Coverage gain: 109 sq km 44937 persons

Effected Stations Night operation:

Station	Present NIF	Present Population	NIF w/ WBAG	Pop with WBAG	Pop Loss
WCRK, Morristown, TN 0.5 kW N	5.0 mV/m	39765	8.32 mV/m	32990	6775
WDEL, Wilmington, DE 5 kW – N-DA	6.38 mV/m	448417	7.70 mV/m	399528	48889
WGBR, Goldsboro, NC 0.8 kW- N-DA	19.91 mV/m	44013	22.25 mV/m	39518	4495
WGOW, Chatanooga, TN 1 kW-N-DA	5.58 mV/m	149617	7.17 mV/m	127113	22504
Loss Total					82663

Net population - Decrease of 37726 persons Efficiency (Gain/Loss of population) 0.54

Effects of the diurnal factor at 05:00 AM are similarly limited. The authorization for WBAG is not immediately available, so sunrise times are not listed. The factor would be effective only for a few months and enhancement to schedule by geography would be available only toward WDEL and WGBR which are located east of WBAG.