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November 18, 2005

Via First Class Mail

Office of the Secretary
Federal Communications Commission
9300 East Hampton Drive
Capitol Heights, MD 20743

Re: RM NO. 11287
Petition for Rulemaking to Establish a Low Power
AM Radio Service

Dear Madam Secretary:

The original and four copies of engineering comments opposing the adoption of a Low Power AM Radio Service are enclosed.

I certify that those parties listed below have been provided with a copy of these comments via First Class Mail.

Very truly yours,

Louis R. du Treil
Louis R. du Treil, Sr., P.E.

cc: w/enclosure

The Amherst Alliance of Michigan, et al
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ENGINEERING COMMENTS REGARDING
ESTABLISHMENT OF LOW POWER AM RADIO SERVICE
RULE MAKING NO. 11287

The consulting engineering firm of du Treil, Lundin & Rackley, Inc. opposes the adoption of a low power AM radio service (LPAM) for the following reasons.

The petitioners propose a simplistic allocation plan for LPAM based on separation between stations. This approach indicates a lack of understanding of the complexity of the AM allocation process. The allocation method employed for LPFM is not workable in the AM band. Listed below are a few of the complex allocation features of the AM band.

1. During daytime hours the coverage of a station is determined by the antenna employed, the power, the frequency and ground conductivity.
2. During nighttime hours the coverage of most stations is determined by the factors listed in Item 1; however, interference to other stations is based on skywave propagation of the signal.
3. Class A stations are provided daytime protection from co-channel interference to the 0.1 mV/m contour.
4. Class A stations are provided daytime protection from first-adjacent channel interference to the 0.5 mV/m contour.
5. Class A stations are provided protection during "critical hours", the two hours after sunrise and the two hours before sunset.

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6. Class A stations are provided nighttime protection from interference to the 0.1 mV/m groundwave contour.
7. Class A stations are provided nighttime protection from interference to the 0.5 mV/m 50 percent skywave contour.
8. The protection of Class A stations in Alaska differs somewhat from the Class A stations in the lower 48 states.
9. Class B, C and D stations are protected to the 0.5 mV/m daytime groundwave contour.
10. Class B stations are protected during nighttime hours to the 50 percent RSS contour.
11. Class C stations enjoy whatever nighttime protection which derives from separation of daytime facilities
12. Mexican stations of various classes exist along the border and well into Mexican territory, which must be protected from interference both day and night.
13. Canadian stations of various classes exist along the border and well into Canadian territory, which must be protected from interference both day and night.

These facts show the complexity of the AM allocation scheme. Because of the complexity, there is no rationale to the use of separation distances as proposed by the LPAM petitioners, which would meet the allocation requirements under all possible scenarios. For example, on the frequency 750 kHz, the nighttime 0.5 mV/m 50 percent skywave contour of Class A station WSB Atlanta, GA extends to a distance of approximately 950 kilometers (about 600 miles). In order to protect WSB from interference, a 50 watt nondirectional station

would have to be located about 1300 kilometers (800 miles) from the WSB contour or 1750 kilometers from the WSB transmitter location. On the other hand if there was an open location for a new Class C station on 1230 kHz, a distance of 320 kilometers (200 miles) might be adequate separation to meet allocation requirements.

This firm has many decades of experience dealing with AM allocation situations, and do not believe it is possible under current allocation rules to establish new stations operating with an omnidirectional antenna and power of 50 watts 24 hours a day on any frequency in the AM band, except for very sparsely populated areas in the mountainous or desert areas in the western part of the United States.

The AM band is the oldest broadcasting band, heavily used and very complex from an allocation standpoint. The AM band is not a logical or practical home for a low power service.



Louis R. du Treil, Sr., P.E.

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