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April 24, 1998

Ms. Magalie Roman Salas, Secretary
FEDERAL COMMUNICATIONS COMMISSION
1919 M. Street, NW
Washington, DC 20554

RE: RM-9208 Microstation Radio Broadcast Service
RM-9242 Low Power FM (LPFM) Broadcast Service

Dear Ms. Salas:

New Jersey Broadcasting, Inc. hereby submits its comments in opposition to the above-referenced petitions before the Commission, which seek the establishment of rule making proceedings towards the establishment of microstation radio broadcast service and low power FM broadcast service.

As explained in detail in the attached Statement prepared by our consulting engineer, New Jersey Broadcasting, Inc. is against the establishment of microstations and low power FM stations because the result will be increased interference to existing broadcast stations, among other things.

Should any questions arise concerning these comments, please contact the undersigned.

Sincerely,

Stephen J. Scola

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STATEMENT CONCERNING THE MICROSTATION & LOW POWER FM PROPOSALS

I, Michael J. Ferriola, am a contract/consulting engineer for the company Broadcast Technologies, Inc., which provides technical services for a number of radio stations in New Jersey and Pennsylvania. I have been a Broadcast Engineer for over 20 years, held an FCC First Class License, and have been certified as a Professional Broadcast Engineer by the Society of Broadcast Engineers. I have been asked by New Jersey Broadcasting, Inc. to comment on the two proposals presently before the Commission concerning "Microstation" and Low Power FM.

1. MICROSTATION PROPOSAL.

In the proposal designated "Petition for a Microstation Radio Broadcasting Service", the Commission would designate a single FM channel and a single AM channel across the country for very low power (1 watt @ 50 feet) stations. The proposal envisions the country being divided up into "cells" of one or so square miles to allow every community or city neighborhood to have its own radio station. These stations would all be on the same frequency, so whatever interference they created would be mostly to each other.

The major problem with the proposal is what frequencies would the Commission designate? The proposal doesn't say. The AM band, with the exception of the Expanded Band, is heavily populated with stations throughout the country. The Expanded Band, with some retrievals of

already approved construction permits, might have room. The FM band is even worse, with no feasible way to designate any existing commercial channel for this purpose. The non-commercial part of the band is not as crowded, especially away from the cities, and with some changes might be able to accommodate this new Microstation channel. The main problems I see is whatever channel is chosen on the FM band, it will pretty much make that channel and its first adjacent completely useless for high power stations, with some degradation on second and third adjacents. If somehow the frequency could be placed in the educational portion of the band and some existing educational stations moved, it all might be feasible. However, since the proposal encourages transmitter experimentation, I am troubled by the citizen-band mentality that could follow, with some Microstation licensees attempting to get better coverage by upping their power above the 1-watt level, or modifying their transmitters/antennas in some other way. This of course would cause interference to the other Microstations, nearby educational stations, and Channel 6. I can't imagine the Commission having the staff to be able to get close to adequately regulating this, but given all the above, this proposal might be a feasible one from a technical standpoint if the two frequencies could be found.

2. LOW POWER FM PROPOSAL.

The second proposal is a Petition for Rulemaking for a new class of broadcast Station called "Low Power FM(LPFM)". While the Microstation proposal above would have a large impact on existing broadcasters, this proposal is so major that it could sweep away our whole present system of regional broadcasting, allowing large numbers of additional radio stations.

The proposal allows this through the elimination of second and third adjacent transmitter interference considerations, and receiver IF considerations. It creates three new classes of FM stations, ranging from quite low power up to the equivalent of the old Class A (3 kW). It suggests that modern receiver technology has improved to the point where these types of interference are no longer a problem. Further, they point out that in the past where stations have been grandfathered short-spaced, the Commission has ignored this type of interference and allowed these short-spaced stations full upgrades.

A quick check of the county where I live, (Atlantic County, NJ) shows for example that there are roughly 24 second and third adjacent frequencies that could become available for stations at some power level. These are mostly frequencies that can't be used now because they are second and third adjacent to the existing Atlantic County stations, or are cochannel or first adjacent to Philadelphia and other southern New Jersey area stations, which could be occupied at the lower power levels of the proposal.

I believe the technical premise of the proposal is flawed. It drastically overstates the ability of modern radios to screen out these types of interference. Toward the outer part of the protected contour of a radio station and within a mile or so of the interfering transmitter sites, second and third adjacent interference is certainly a problem. Many car radios, including mine (a typical Delco), reduce treble significantly and blend to mono whenever this type of interference is detected. In fact, fourth and fifth adjacent interference can even be a problem. The typical reaction of someone listening to this is to tune to some other station that is "clearer". In addition, many tabletop radios, including at least two of mine, have trouble sorting out closely spaced stations. As a good example near my home, there are two grandfathered short space stations second adjacent to

each other in Atlantic County---WFPG on 96.9 and WBSS on 97.3. Even though they are each 50 kW and only 8 miles from my home, these two table radios can't pick up both easily. They only pick up one at a time, depending on which way I turn the radio. And with these two stations, it is impossible for my car radio to pick up WBSS clearly within about two miles of the WFPG transmitter site, even though WBSS is a 50 kW signal only 16 miles away. Adding numerous second and third adjacent stations will make all stations have significant reception problems even in their home counties, let alone at the edges of their protected contours.

The show of precedent, in which the proposal indicates that the Commission has ignored second and third adjacent interference with grandfathered short-spaced stations desiring power increases, is also flawed. The Commission in this situation was dealing with stations already on the air in 1962, and already causing interference to each other. Increasing facilities of these stations, while causing additional interference to each other, tended to balance out as each increased power, while at the same time improved coverage in other directions. But this situation is totally different. This is adding all sorts of new sources of interference that weren't there before. And as the example above indicates, the interference area would be considerable greater than the "100 ft. or less" indicated in the proposal.

Even worse, coverage for existing stations could be substantially reduced by co-channel and first adjacent channel interference. While the existing method of separation standards limits any station from being too close to another, the proposal would shift to an interference standard for determining whether a station would fit. Since the power of the new station could be reduced to meet the interference standards, stations much closer than what is allowed now on co- and adjacent channels would be allowed. But the interference and coverage standards are an inexact method when determining coverage because they are based on 2 to 10 mile terrain plots. In reality, terrain

farther out plays a very high role in most locations, with coverage of present stations compressed or expanded considerably depending on the overall surrounding terrain, much more than would be evident from the 2 to 10 mile terrain standard. A perfect example of this is WDHA in Morris County, NJ, whose transmitter site sits on a high hill on the eastern edge of relatively high terrain, overlooking relatively low terrain to the east and south. WDHA has very good coverage into Middlesex and Monmouth counties toward the southeast, well beyond its protected contour, and regularly gets ratings in those counties. But this proposal would allow a number of low power stations on co- and adjacent channels in those counties, effectively cutting back WDHA's coverage area to about 1/3 its present size. I suspect that there are many other situations throughout the country like this. So even co-channel and first adjacent channel stations could be substantially impacted.

I believe both these proposals will increase interference to existing stations, in some cases drastically. Plus the ability of the Commission to regulate this interference will be sorely tested. I hope the Commission proceeds very slowly in approving anything near this radical a change.

Michael J. Ferriola