Occupied Bandwidth and Spurious Emissions Measurements

To Demonstrate Compliance with Section 73.317(b) through 73.317(d) of the FCC Rules and Regulations

for

Clear Channel Broadcasting Licenses, Inc.
WYLD-FM – 98.5 MHz
New Orleans, LA (Facility ID No: 11972)
WQUE-FM – 93.3 MHz
New Orleans, LA (Facility ID No: 11915)
Entercom New Orleans License, LLC
WTKL(FM) – 95.7 MHz
New Orleans, LA (Facility ID No: 52434)
WEZB(FM) – 97.1 MHz
New Orleans, LA (Facility ID No: 20346)
WLMG(FM) – 101.9 MHz
New Orleans, LA (Facility ID No: 34376)

July 25, 2005

Measurements were conducted to demonstrate that WYLD-FM, New Orleans, LA, WQUE-FM, New Orleans, LA, WTKL(FM), New Orleans, LA, WEZB(FM), New Orleans, LA and WLMG(FM), New Orleans, LA, operating into a combined antenna system, comply with section 73.317(b) through 73.317(d) of the FCC Rules and Regulations. Randall L. Mullinax conducted the measurements on July 25, 2005, with all five stations simultaneously utilizing the shared antenna as specified in "Special operating conditions or restrictions 1" of the WYLD-FM Construction Permit BPH-20040205AEZ. The spectrum analyzer used for the measurements was an Agilent Technologies model E4402B, S/N MY41441731. A sample of the signals of all five stations was derived from the main transmission line at the output of the combiner and was coupled to the analyzer using a short length of RG-223 50Ω double-shielded coaxial cable. Two 6 dB pads (Bird model 5-A-MFN-06) were inserted ahead of the analyzer to avoid overload and to provide isolation.

The measured unmodulated carrier level of all five stations was -14 dBm and this level was used as the reference for all harmonic, spurious and intermoduation measurements. All measurements were conducted with the transmitters and associated equipment adjusted as used in normal program operation.

For all occupied bandwidth measurements, the spectrum analyzer was placed in the peak hold mode for at least 10 minutes per measurement before the waveforms were observed. As shown in Figures 1 though 5, all five transmitters were observed to be in full compliance with section 73.317(b) of the FCC Rules with emissions appearing on frequencies removed from the carrier frequencies by between 120 kHz and 240 kHz attenuated by at least 25 dB below the unmodulated carrier level indicating the occupied bandwidth of each transmitter to be 240 kHz or less. All five transmitters were also observed to be in full compliance with section 73.317(c) of the FCC Rules with emissions appearing on frequencies removed from the carrier frequencies by between 240 kHz and 600 kHz attenuated by at least 35 dB.

Figure 1
WYLD-FM

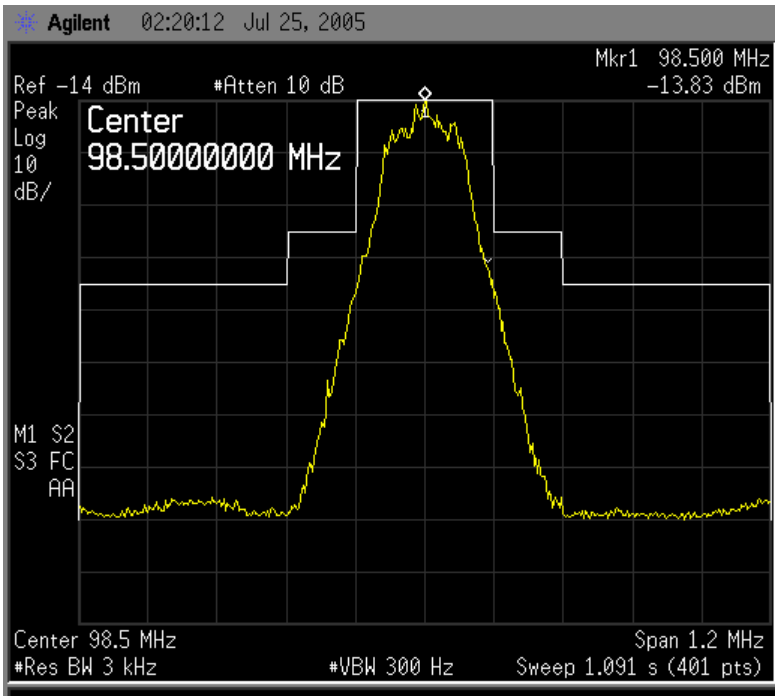


Figure 2
WQUE-FM

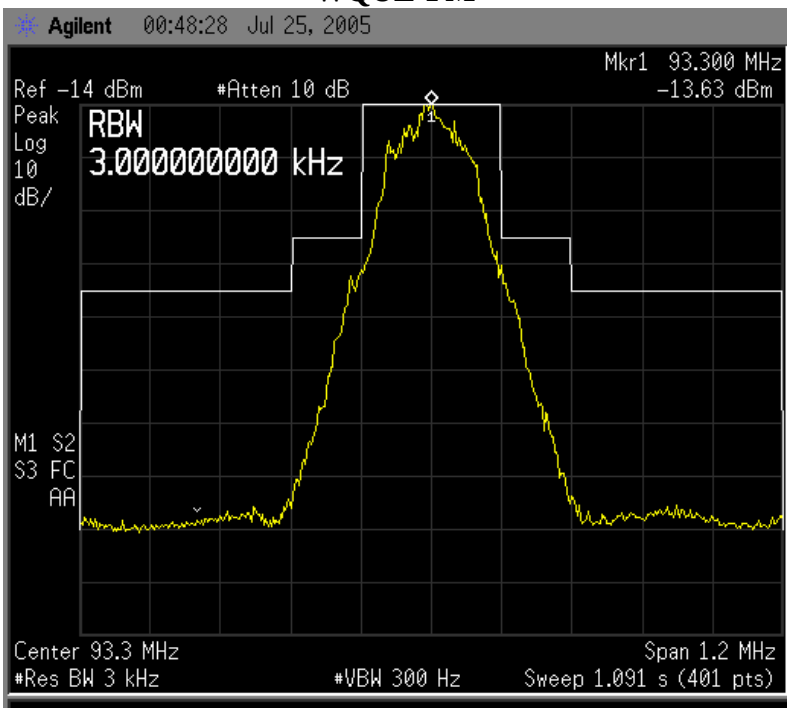


Figure 3
WTKL(FM)

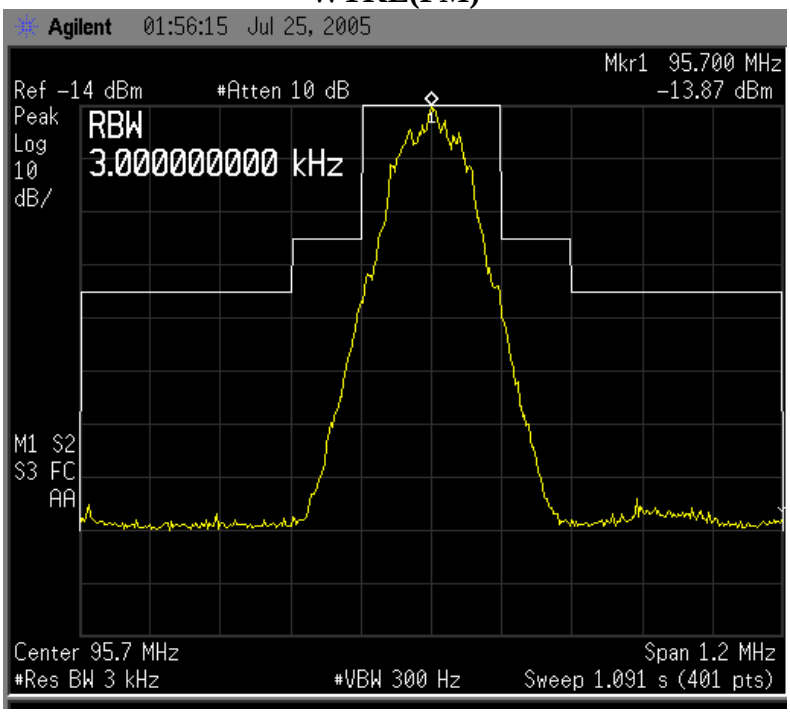


Figure 4
WEZB(FM)

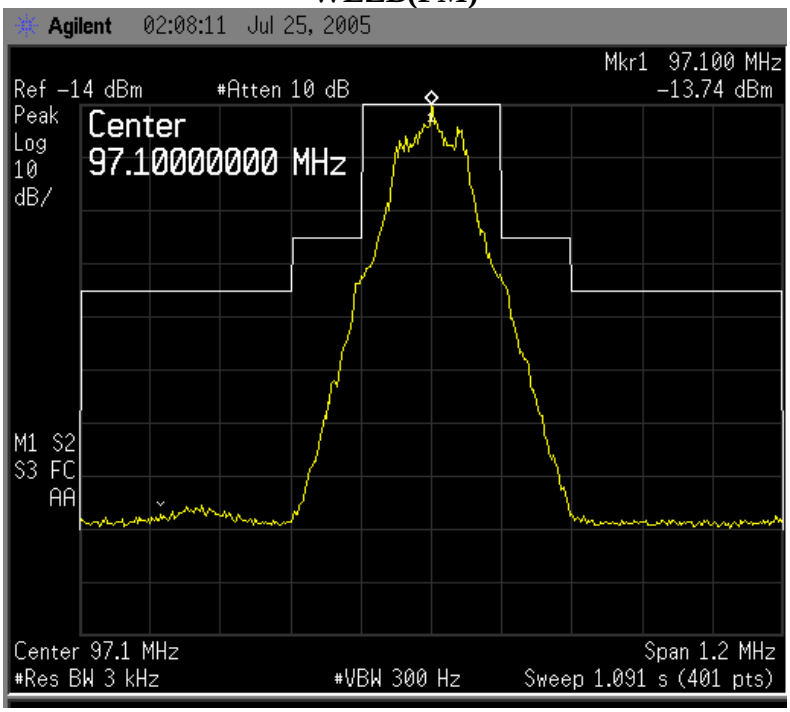
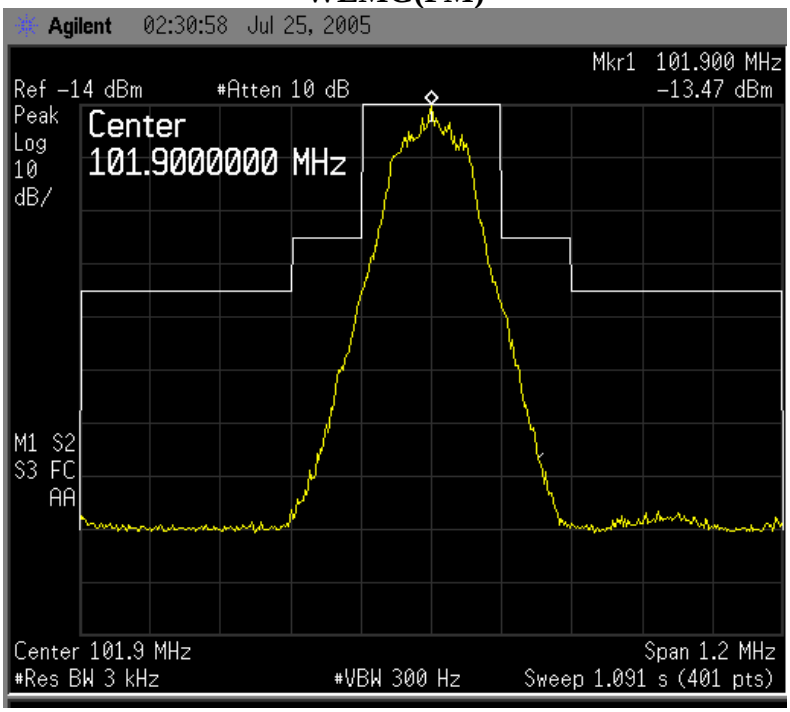


Figure 5
WLMG(FM)



Extensive measurement were also conducted to insure that emissions appearing on frequencies removed from the carrier frequencies by more than 600 kHz were attenuated by at least 80 dB as required by section 73.317(d) of the FCC Rules. To facilitate these measurements, notch filters were placed between the two 6 dB pads so that the spectrum analyzer gain could be increased by 20 dB. The filters were necessary to avoid the generation of false spurious or intermodulation products in the analyzer. The attenuation of the notch filters was 16.8 dB at 93.3 MHz, 22.1 dB at 95.7 MHz, 22.6 dB at 97.1 MHz and 23.9 dB at 98.5 MHz and 20.6 dB at 101.9 MHz.

The most likely harmonic and intermodulation frequencies in the range of frequencies between 5 MHz and 500 MHz that could be produced by the combined operation of WYLD-FM, WQUE-FM, WTKL(FM), WEZB(FM) and WLMG(FM) were calculated and the results of measurements at those frequencies are listed in Table 1.

TABLE 1

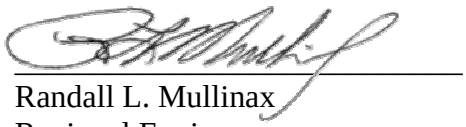
Description	Freq. MHz	Attenuation dB	Description	Freq. MHz	Attenuation dB
(2 X 93.3) - 95.7	90.9	>90	2 X 101.9	203.8	>90
(2 X 93.3) - 97.1	89.5	>90	(3 X 93.3) - 95.7	184.2	>90
(2 X 93.3) - 98.5	88.1	>90	(3 X 93.3) - 97.1	182.8	>90
(2 X 93.3) - 101.9	84.7	>90	(3 X 93.3) - 98.5	181.4	>90
2 X 93.3	186.6	>90	(3 X 93.3) - 101.9	178	>90
(2 X 95.7) - 93.3	98.1	>90	3 X 93.3	279.9	>90
(2 X 95.7) - 97.1	94.3	>90	(3 X 95.7) - 93.3	193.8	>90
(2 X 95.7) - 98.5	92.9	>90	(3 X 95.7) - 97.1	190	>90
(2 X 95.7) - 101.9	89.5	>90	(3 X 95.7) - 98.5	188.6	>90
2 X 95.7	191.4	>90	(3 X 95.7) - 101.9	185.2	>90
(2 X 97.1) - 93.3	100.9	>90	3 X 95.7	287.1	>90
(2 X 97.1) - 95.7	98.5	>90(Note 1)	(3 X 97.1) - 93.3	198	>90
(2 X 97.1) - 98.5	95.7	>90(Note 2)	(3 X 97.1) - 95.7	195.6	>90
(2 X 97.1) - 101.9	92.3	>90	(3 X 97.1) - 98.5	192.8	>90
2 X 97.1	194.2	>90	(3 X 97.1) - 101.9	189.4	>90
(2 X 98.5) - 93.3	103.7	>90	3 X 97.1	291.3	>90
(2 X 98.5) - 95.7	101.3	>90	(3 X 98.5) - 93.3	202.2	>90
(2 X 98.5) - 97.1	99.9	>90	(3 X 98.5) - 95.7	199.8	>90
(2 X 98.5) - 101.9	95.1	>90	(3 X 98.5) - 97.1	198.4	>90
2 X 98.5	197	>90	(3 X 98.5) - 101.9	193.6	>90
(2 X 101.9) - 93.3	110.5	>90	3 X 98.5	295.5	>90
(2 X 101.9) - 95.7	108.1	>90	(3 X 101.9) - 93.3	212.4	>90
(2 X 101.9) - 97.1	106.7	85	(3 X 101.9) - 95.7	210	>90
(2 X 101.9) - 98.5	105.3	80(Note 3)	(3 X 101.9) - 97.1	208.6	>90

Description	Freq. MHz	Attenuation dB	Description	Freq. MHz	Attenuation dB
(3 X 101.9) - 98.5	207.2	>90	(3 X 98.5) - (2 X 97.1)	101.3	>90
3 X 101..9	305.7	>90	(3 X 98.5) - (2 X 101.9)	91.7	>90
(3 X 93.3) - (2 X 95.7)	88.5	>90	(3 X 101.9) - (2 X 93.3)	119.1	>90
(3 X 93.3) - (2 X 97.1)	85.7	>90	(3 X 101.9) - (2 X 95.7)	114.3	>90
(3 X 93.3) - (2 X 98.5)	82.9	>90	(3 X 101.9) - (2 X 97.1)	111.5	>90
(3 X 93.3) - (2 X 101.9)	76.1	>90	(3 X 101.9) - (2 X 98.5)	108.7	>90
(3 X 95.7) - (2 X 93.3)	100.5	87	4 X 93.3	373.2	>90
(3 X 95.7) - (2 X 97.1)	92.9	>90	4 X 95.7	382.8	>90
(3 X 95.7) - (2 X 98.5)	90.1	>90	4 X 97.1	388.4	>90
(3 X 95.7) - (2 X 101.9)	83.3	>90	4 X 98.5	394	>90
(3 X 97.1) - (2 X 93.3)	104.7	>90	4 X 101.9	407.6	>90
(3 X 97.1) - (2 X 95.7)	99.9	>90	5 X 93.3	466.5	>90
(3 X 97.1) - (2 X 98.5)	94.3	>90	5 X 95.7	478.5	>90
(3 X 97.1) - (2 X 101.9)	87.5	>90	5 X 97.1	485.5	>90
(3 X 98.5) - (2 X 93.3)	108.9	>90	5 X 98.5	492.5	>90
(3 X 98.5) - (2 X 95.7)	104.1	87			

Note 1 – The WYLD-FM transmitter was turned off and the notch filer for 98.5 MHz was removed from the circuit to facilitate this measurement.
Note 2 – The WTKL(FM) transmitter was turned off and the notch filer for 95.7 MHz was removed from the circuit to facilitate this measurement.
Note 3 – This level remained unchanged with all five transmitters turned off. This level results from transmissions from WKBU, Kenner, LA of 105.3 MHz.

While special attention was given to the "product" frequencies listed in Table 1, measurements were conducted covering the entire range of frequencies between 5 MHz and 500 MHz. The only signals detected at levels attenuated by less than 80 dB below the unmodulated carrier levels and appearing on frequencies removed from the WYLD-FM, WQUE-FM, WTKL(FM), WEZB(FM) and WLMG(FM) carrier frequencies by more than 600 kHz were the carriers of nearby FM and Television stations. In each case where these signals were observed to be at a level greater than –94 dBm (80 dB below the unmodulated carrier level of all five stations which was -14 dBm) the WYLD-FM, WQUE-FM, WTKL(FM), WEZB(FM) and WLMG(FM) transmitters were turned off while the amplitude of the signal was observed to be unchanged, indicating that the signal was not the result of the combined operation of WYLD-FM, WQUE-FM, WTKL(FM), WEZB(FM) and WLMG(FM).

The results of these measurements confirm that the combined operations of WYLD-FM, WQUE-FM, WTKL(FM), WEZB(FM) and WLMG(FM) into a shared antenna are in full compliance with section 73.317(b) through 73.317(d) of the FCC Rules and Regulations.



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