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ENGINEERING STATEMENT

ON BEHALF OF
COX RADIO, INC

IN SUPPORT OF APPLICATIONS FOR LICENSE TO COVER
THE FOLLOWING FM AUXILIARY FACILITIES

WFEZ(FM) – 226C0 MIAMI, FL – BXPB-20150917ADB
WFLC(FM) – 247C - MIAMI, FL 247C – BXPB-20150917ACZ
WHQT(FM) – 286C0 – CORAL GABLES, FL – BXPB-20150917ADP

MARCH 2017

PURPOSE AND SCOPE

This Statement presents the results of measurements performed on the newly constructed auxiliary facilities of FM stations WFEZ(FM), Miami, FL; WFLC(FM), Miami, FL and WHQT(FM), Coral Gables, FL. The data presented in this report is responsive to Special Operating Condition 1 of the following auxiliary facility construction permits:

WFEZ(FM) – 226C0 – Miami, FL - BXPB-2010917ADB,

WFLC(FM) – 247C – Miami, FL - BXPB-2010917ACZ, and

WHQT(FM) – 286C0 – Coral Gables, FL - BXPB-2010917ADP.

The data herein presented demonstrates that the operation of these facilities is in compliance with the spurious emissions requirements of 47 C.F.R. §73.317(b) through 73.317(d).

ANTENNA SYSTEM DETAILS

The three auxiliary facilities authorized by the above listed CPs share an antenna with the licensed main facility of WEDR(FM), 256C1, Miami, FL (F.C.C. File No BLH-20151112XRD). The four transmitters are combined in a Dielectric branch combiner and feed a common Dielectric DCRU12D50PT075 broadband antenna.

TEST PROCEDURE

In the early morning hours of March 6, 2017, the nearby licensed main facilities for WFEZ(FM), WFLC(FM) and WHQT(FM) were de-energized and the permitted facilities were energized at their nominal power levels. The WDER(FM) main facility remained energized at its authorized power level. A Rohde and Schwarz FSH3 Spectrum Analyzer was connected to a forward power sample port on the output of the Dielectric combiner at the point the combiner feeds the transmission line. A Microwave Filter Corporation tunable notch filter was inserted between the sample port and the analyzer input. The notch filter was tuned as necessary to reduce the fundamental carrier levels to improve the dynamic range of the measurement system. All four facilities were operating at licensed power outputs during all measurements. The reference level of the unmodulated carrier of the F1 frequency was determined and set at 20 dB above the top line of the analyzer display screen. This 20 dB offset results in the screen displaying levels between -20 and -120 dBc (dB below carrier). Each of the primary frequencies of interest (listed in Table 1) was then entered into the analyzer and the level was read directly from the analyzer screen. Each of the carriers and frequencies surrounding the carriers was then examined to determine if the emissions complied with the required sideband attenuation requirements.

Finally, a sweep of the frequencies above and below the FM band was made to determine if any spurious emissions were present.

RESULTS

The attached Table 1 details the results of the measurements. No intermodulation product in excess of 84 dB below the associated carrier was observed. No harmonic product in excess of 89 dB below the associated carrier was observed.

CONCLUSIONS

The Dielectric combiner provides adequate isolation, between inputs, to permit simultaneous operation of the four facilities without interaction that results in undesirable intermodulation products. The three permitted auxiliary facilities, as well as the licensed WEDR(FM) facility, are in full compliance with applicable F.C.C. rules and regulations regarding spurious emissions.

CERTIFICATION

I, Robert M. Smith Jr., of Port St. Lucie, Florida, do hereby certify that:

I conducted the measurements detailed in this report,

I am an experienced and qualified broadcast technical consultant,

My qualifications are a matter of record with the Federal Communications Commission,

And that all of the information included in this report is true and correct.



Robert M. Smith Jr.

March 12, 2017

COX RADIO, INC.
WFEZ(FM) - WFLC(FM) - WHQT(FM)
INTERMODULATION - SPURIOUS AND HARMONIC MEASUREMENTS

TABLE 1

<u>F1 (MHZ)</u>	<u>F2(MHZ)</u>	<u>PRODUCT RELATIONSHIP</u>	<u>PRODUCT FREQ. (MHZ)</u>	<u>F1 REFERENCE LEVEL(Db)</u>	<u>OBSERVED PRODUCT LEVEL (Db)</u>	<u>ACTUAL PRODUCT LEVEL (DbC)</u>	<u>NOTES</u>
93.1	97.3	(2 * F1) - F2	88.9	+20	-84	-104	
93.1	99.1	(2 * F1) - F2	87.1	+20	-82	-102	
93.1	105.1	(2 * F1) - F2	81.1	+20	-78	-98	
97.3	93.1	(2 * F1) - F2	101.5	+20	-64	-84	1
97.3	99.1	(2 * F1) - F2	95.5	+20	-86	-106	
97.3	105.1	(2 * F1) - F2	89.5	+20	-81	-101	
99.1	93.1	(2 * F1) - F2	105.1	+20	-90	-110	2
99.1	97.3	(2 * F1) - F2	100.9	+20	-74	-94	
99.1	105.1	(2 * F1) - F2	93.1	+20	-92	-112	3
105.1	93.1	(2 * F1) - F2	117.1	+20	-78	-98	
105.1	97.3	(2 * F1) - F2	112.9	+20	-78	-98	
105.1	99.1	(2 * F1) - F2	111.1	+20	-79	-99	
93.1	N/A	2 * F1	186.2	+20	-72	-92	
93.1	N/A	3 * F1	279.3	+20	n/f	n/f	4
97.3	N/A	2 * F1	194.6	+20	-73	-93	
97.3	N/A	3 * F1	291.9	+20	n/f	n/f	4
99.1	N/A	2 * F1	198.2	+20	-77	-97	
99.1	N/A	3 * F1	297.3	+20	n/f	n/f	4
105.1	N/A	2 * F1	210.2	+20	-69	-89	
105.1	N/A	3 * F1	315.3	+20	n/f	n/f	4

- NOTES:**
- 1 The 97.3 transmitter was momentarily de-energized with no change in observed level - observed RF is from nearby unrelated facility
 - 2 The WHQT(FM) transmitter was momentarily de-energized to allow measurement of 105.1 MHz
 - 3 The WFEZ(FM) transmitter was momentarily de-energized to allow measurement of 93.1 MHz
 - 4 No emissions observed that exceeded the noise floor of approximately 115 dBc