

TECHNICAL EXHIBIT

§73.317(b-d) COMPLIANCE

**WTMT - 105.9 MHz
Weaverville, NC**

**WOXL - 96.5 MHz
Biltmore Forest, NC**

November 2010

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§73.317(b-d) Compliance

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ENGINEER'S CERTIFICATION

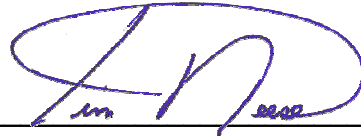
The data that comprises this report is based on field measurements made by Tim J. Neese, an officer of MultiTech Consulting, Inc., on the dates indicated in the report.

Where applicable, information from the FCC's secondary database and data on file was utilized. While believed accurate, errors or omissions in the database or file data and any damages resulting from such shall not be the liability of this firm.

The report was prepared by the undersigned, whose qualifications are a matter of record before the Federal Communications Commission.

I declare under penalty of perjury that the contents of this report, with the exception of facts of which the Federal Communications Commission may take official notice, are true and accurate to the best of my knowledge and belief.

This the 26th day of November 2010.



Tim J. Neese, President
MultiTech Consulting, Inc.

DISCUSSION

To insure compliance with 47 C.F.R. §73.317(b-d), spurious emission measurements of di-plexed FM broadcast stations WTMT and WOXL, Weaverville, NC and Biltmore Forest, NC respectively, were made.

Each station holds a construction permit and this study was conducted as a condition of licensing for each. WTMT operates on 105.9 MHz with an effective radiated power of 9.5 Kilowatts non-directional, and WOXL operates on 96.5 MHz with an effective radiated power of 2.1 Kilowatts utilizing a directional pattern. The master antenna is a Shively Labs 6014-3/3-.5SS-DA with a center of radiation 54 meters above ground level. Transmitters are combined and the antenna matched with a Shively Labs 2530-2A-16-06 branched combiner.

All spectral data referenced herein was acquired using an Agilent model E4402B spectrum analyzer (SN: MY45105823), operated in accordance with the manufacturer's directions. The signal sample was acquired via a Shively Labs precision directional coupler's forward power port. The coupler is inserted between the combiner output and the antenna. The coupling coefficient(s) for frequencies between 1 MHz and 1000 MHz was provided by the manufacturer. In order to prevent analyzer overloading during the measurement of emissions removed from either carrier by more than 3 MHz, notch filter networks tuned to the carrier frequencies were employed. The filters provide an average 60 dB of attenuation at the carrier frequencies and pass all other frequencies between 1 MHz and 1000 MHz with no appreciable attenuation.

Utilizing manufacturer provided insertion loss and antenna gain parameters, the output power of the WTMT and WOXL transmitters was adjusted to produce ERPs as specified within the construction permits. With both transmitters operating, measurements were made both with and without full FM modulation. Measurements were conducted on November 17th and 22nd, 2010 as a part of equipment commissioning and testing.

Analyzer screen captures demonstrating attenuation compliance for frequencies removed from each station's carrier by between 120 and 600 KHz with full FM modulation are attached as Exhibits 1 and 2.

In addition, high resolution measurements of computer calculated harmonic products between the 1st and 5th order were made. In an effort to insure the highest degree of compliance, the WOXL carrier, being 8 dB lower than that of WTMT was utilized as the carrier reference for all measurements. With the exception of WTMT's third harmonic frequency (317.7 MHz) all harmonic products were found to be greater than 85 dB below carrier reference (WOXL carrier). The third harmonic of WTMT was found to be 77 dB below WOXL's carrier, but 85 dB below its own carrier. It should be noted that mathematically, only WTMT, and not a combination of WTMT and WOXL harmonic products, is capable of producing any emissions at 317.7 MHz.

Attached as Exhibit 3 is a copy of the computer calculated 1st through 5th order potential harmonic products, and the measured results for each.

All data indicates the proposed combined operation of WTMT and WOXL to be in compliance with 47 C.F.R. §73.317(b-d), and meets or exceeds the special condition of licensing associated with BPH-20100701AFN and BPH-20100701AFT.

EXHIBIT 1

WTMT 105.9 MHz

Attenuation of frequencies removed from carrier by between 120 and 600 KHz

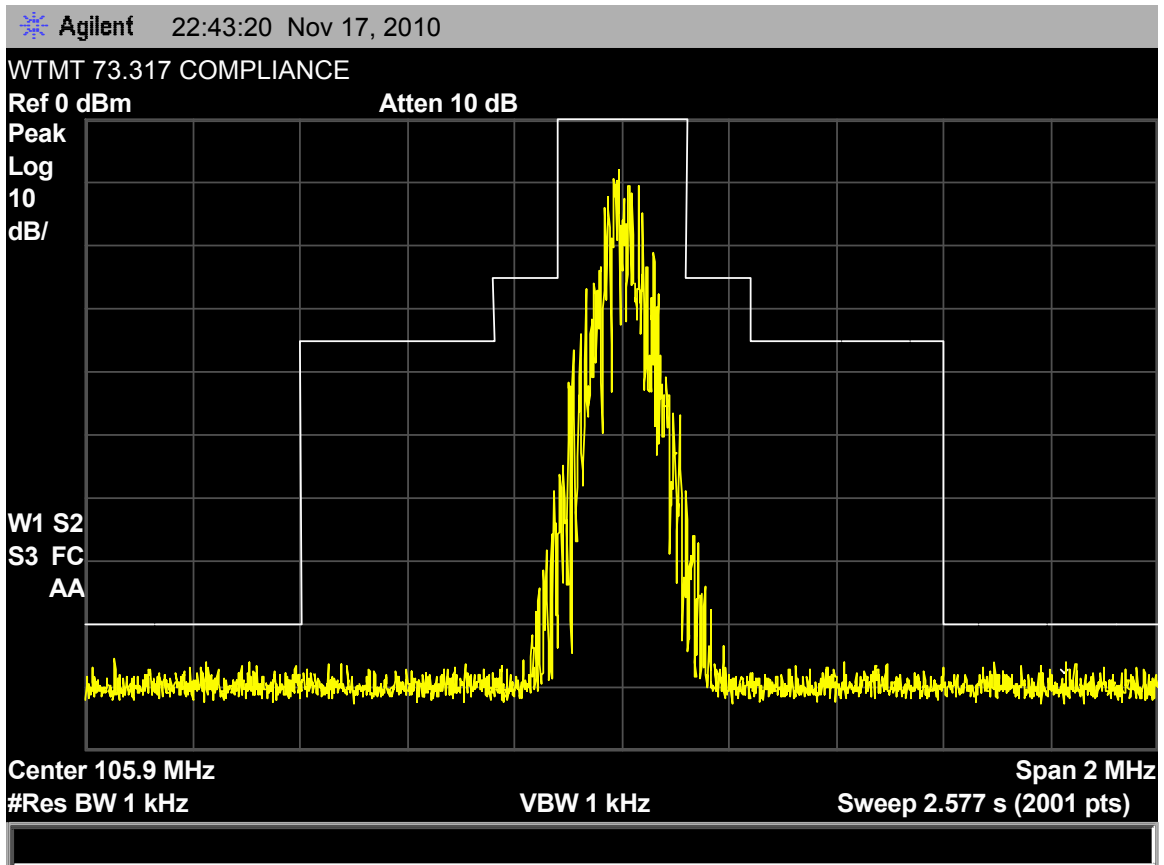


EXHIBIT 2

WOXL – 96.5 MHz

Attenuation of frequencies removed from carrier by between 120 and 600 KHz

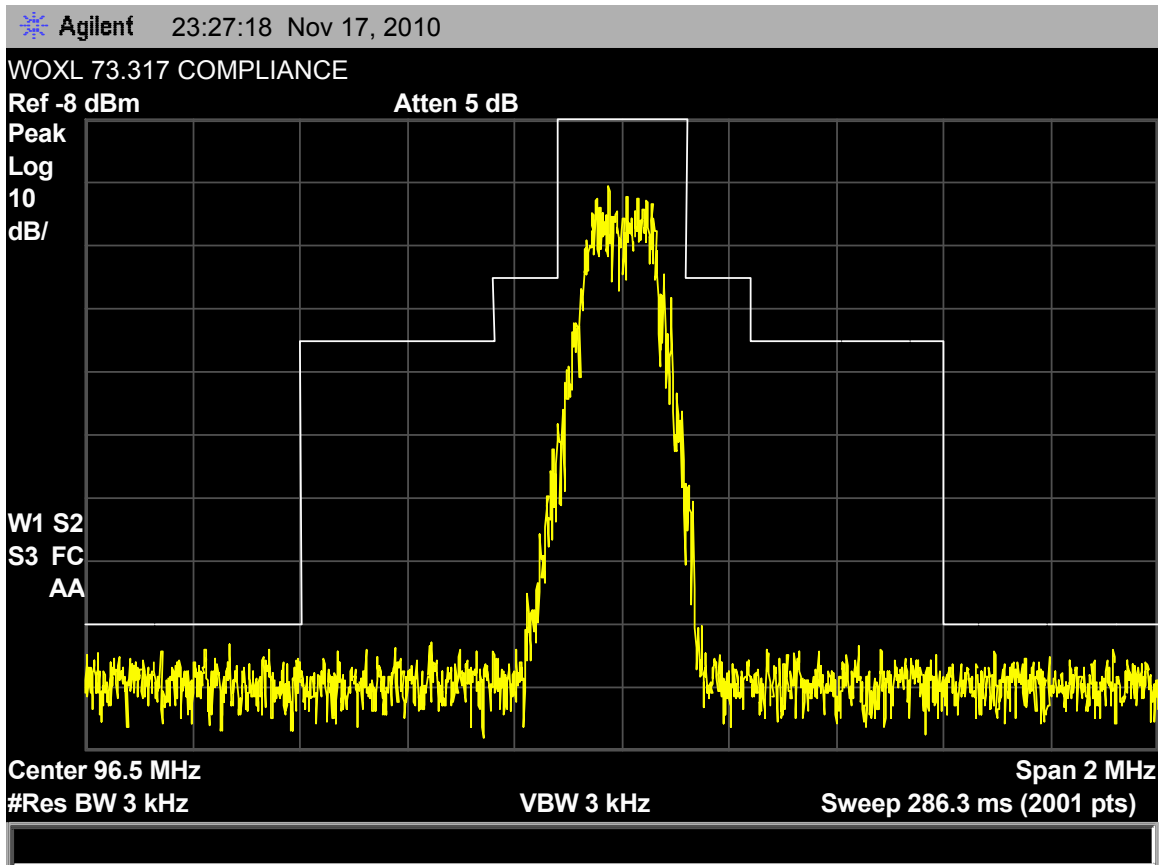


EXHIBIT 3

WTMT – 105.9 MHz & WOXL – 96.5 MHz

Tabulation of Potential Harmonic Products
(Measurements referenced to WOXL carrier)

Frequency MHz	Measured Level dBc
9.400	> -85
18.800	> -85
28.200	> -85
37.600	> -85
47.000	> -85
58.900	> -85
68.300	> -85
77.700	> -85
87.100	> -85
115.300	> -85
124.700	> -85
134.100	> -85
143.500	> -85
164.800	> -85
174.200	> -85
183.600	> -85
193.000	> -85
202.400	> -85
211.800	> -85
221.200	> -85

Frequency MHz	Measured Level dBc
230.600	> -85
240.000	> -85
270.700	> -85
280.100	> -85
289.500	> -85
298.900	> -85
308.300	> -85
317.700	-77 **
327.100	> -85
336.500	> -85
376.600	> -85
386.000	> -85
395.400	> -85
404.800	> -85
414.200	> -85
423.600	> -85
433.000	> -85
482.500	> -85
491.900	> -85
501.300	> -85

Frequency MHz	Measured Level dBc
510.700	> -85
520.100	> -85
529.500	> -85
588.400	> -85
597.800	> -85
607.200	> -85
616.600	> -85
626.000	> -85
694.300	> -85
703.700	> -85
713.100	> -85
722.500	> -85
800.200	> -85
809.600	> -85
819.000	> -85
906.100	> -85
915.500	> -85
1012.000	> -85

** -85 dB below WTMT carrier level