

Exhibit 10 – Statement B  
**COMPLIANCE WITH SPURIOUS EMISSIONS REQUIREMENTS**  
prepared for  
**Radio One Licenses, LLC**  
WKYS(FM) (Auxiliary Antenna) Washington, D.C.  
Facility ID 73200  
Ch. 230B 0.245 kW 209 m

*Radio One Licenses, LLC* (“*Radio One*”) is the licensee of FM station WKYS(FM), which operates on Channel 230B (93.9 MHz) in Washington, D.C. *Radio One* is authorized under construction permit (“CP”) BXPB-20100125ABM to construct a new auxiliary antenna facility for WKYS at the currently licensed transmitter site. The CP contains a *Special Operating Condition* requiring measurement of spurious emissions to demonstrate compliance with Section 73.317(b)-(d) of the FCC Rules. The instant report summarizes the measurements and provides proof that the as-constructed auxiliary facility satisfies this CP condition.

## **Background**

Under normal circumstances, WKYS utilizes the station’s licensed main antenna,<sup>1</sup> a three-bay, full-wavelength spaced Dielectric model DCRM3B1 centered at a height of 168 meters above ground level. This antenna also serves as the auxiliary antenna for *Radio One’s* WMMJ(FM), Ch. 272A (102.3 MHz), Bethesda, MD.<sup>2</sup> A combiner/filter arrangement is installed between each transmitter and the transmission line feeding the common antenna.

A separate antenna, the subject of this report is the WKYS auxiliary antenna authorized in the CP. Since it is proposed to operate only WKYS into this antenna, there is no associated combiner/filter arrangement. Regardless, because this two-bay, full-wavelength spaced Dielectric HDRM2B1 is “interleaved” with the three-bay common antenna described above, RF coupling between the WKYS and WMMJ auxiliary FM transmitters is to be expected. Thus, the importance of regularly monitoring, mitigating, and/or eliminating spurious emissions is understood by the *Radio One* engineers.

## **Measurements**

On December 19, 2012, between the hours of 12 midnight and 2:30 AM, spurious emission measurements were performed by the undersigned with WKYS and WMMJ both

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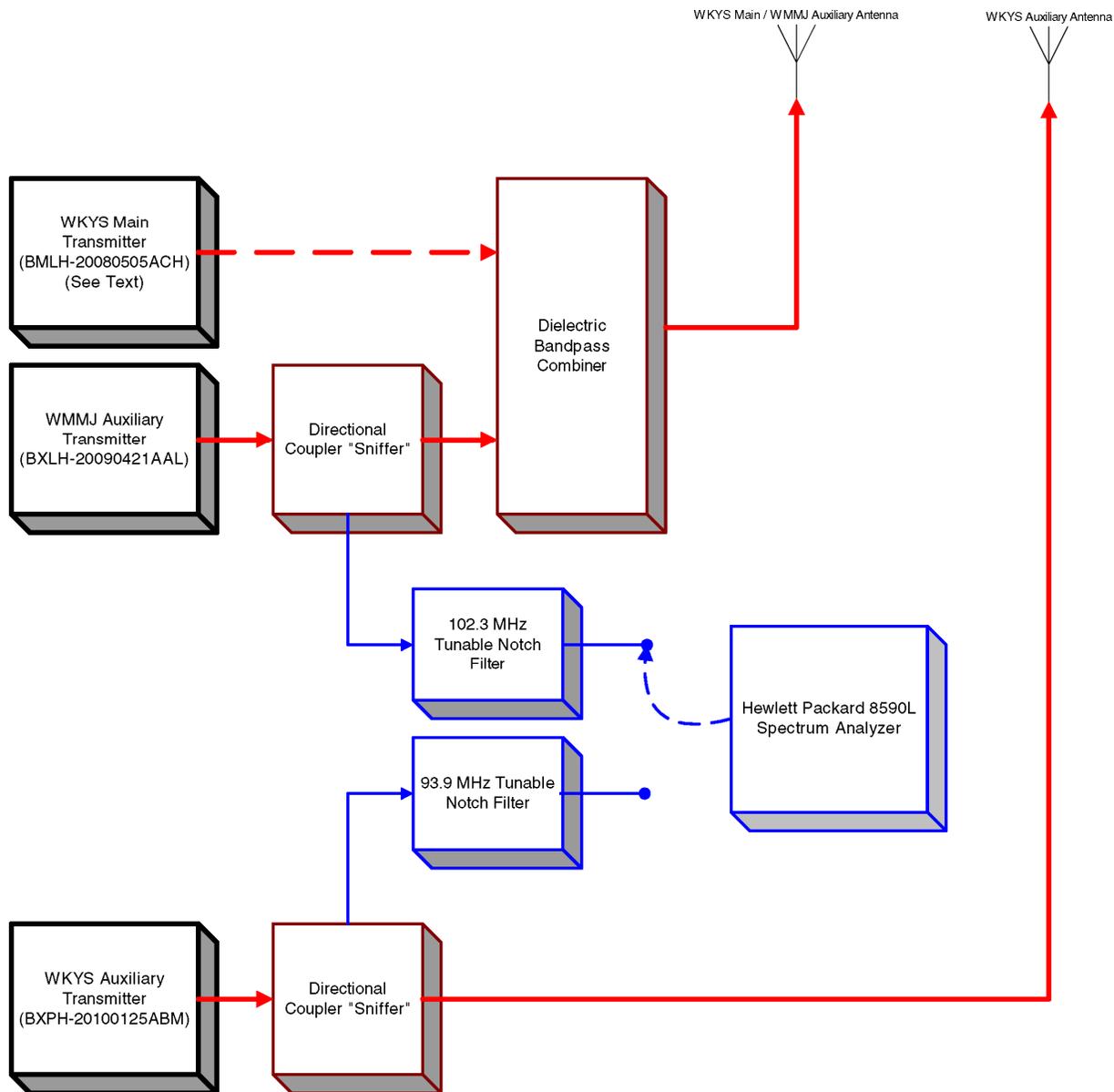
<sup>1</sup> See FCC File Number BMLH-20080505ACH.

<sup>2</sup> See FCC File Number BXLH-20090421AAL.

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operating in FM mode into their respective, auxiliary antennas. A block diagram of the equipment layout employed for the measurements is provided in **Figure 1**, below. As shown, RF samples were derived using a directional coupler “sniffer” element inserted into Bird power meters permanently installed at the outputs of the WKYS and WMMJ auxiliary transmitters. The output of the “sniffer” was connected directly to the input of a Hewlett Packard 8590L Spectrum Analyzer (Serial Number 361AO1230).

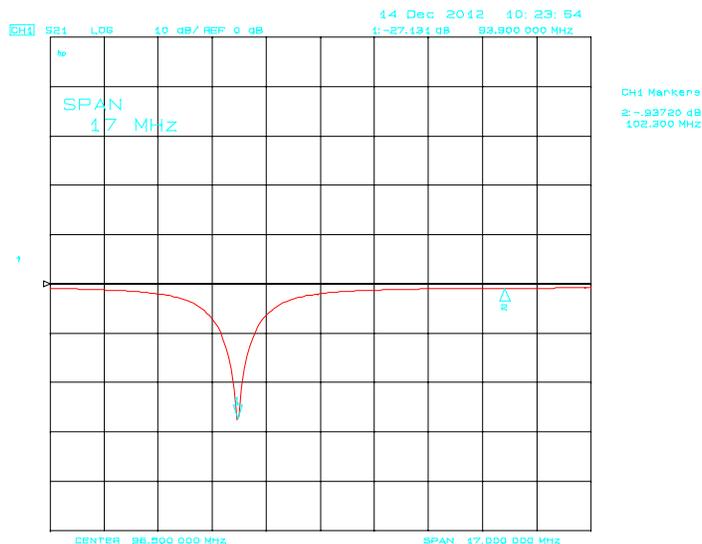


**Figure 1 - WKYS / WMMJ Simplified Block Diagram**

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Whenever necessary to extend the useful dynamic range of the analyzer by eliminating overload errors, Microwave Filter Company model 6367 Tunable Notch Filters were used to attenuate the carrier frequency of the transmitter under test. As indicated by the frequency response<sup>3</sup> of the notch filter provided in **Figure 2** below, the filter tuned to WKYS produces a



**Figure 2 - WKYS Notch Filter Response**

frequency notch greater than 27 dB at the WKYS carrier frequency (93.9 MHz) and less than 1 dB of loss at the WMMJ carrier frequency (102.3 MHz). The filter used to notch the WMMJ carrier frequency was also measured and found to have a similar frequency response shape and pass/reject specifications. As required, the appropriate notch filter was connected between the “sniffer” output of the station under test and the input of the spectrum analyzer.

The resulting spectrum measurements are displayed on the following pages as **Figures 3-6**. For each measurement, the “max-hold” feature of the spectrum analyzer was employed for a ten second period with the carrier being frequency-modulated with normal program material. As demonstrated in the 1 MHz spectrum plots (**Figures 3 and 4**), the auxiliary FM facilities of both stations were found to comply with the bandwidth limitations set forth in Sections 73.317(b)<sup>4</sup> and 73.317(c)<sup>5</sup> of the FCC Rules.

<sup>3</sup> The loss of the notch filter system at frequencies well removed from the fundamental frequencies was measured for the span of frequencies where spurious emission might be expected. Given the level of signals encountered, no correction to the measurements was deemed necessary.

<sup>4</sup> Emissions between 120 and 240 kHz removed from the carrier must be at least 25 dB below the unmodulated carrier.

<sup>5</sup> Emissions between 240 and 600 kHz removed from the carrier must be at least 35 dB below the unmodulated carrier.

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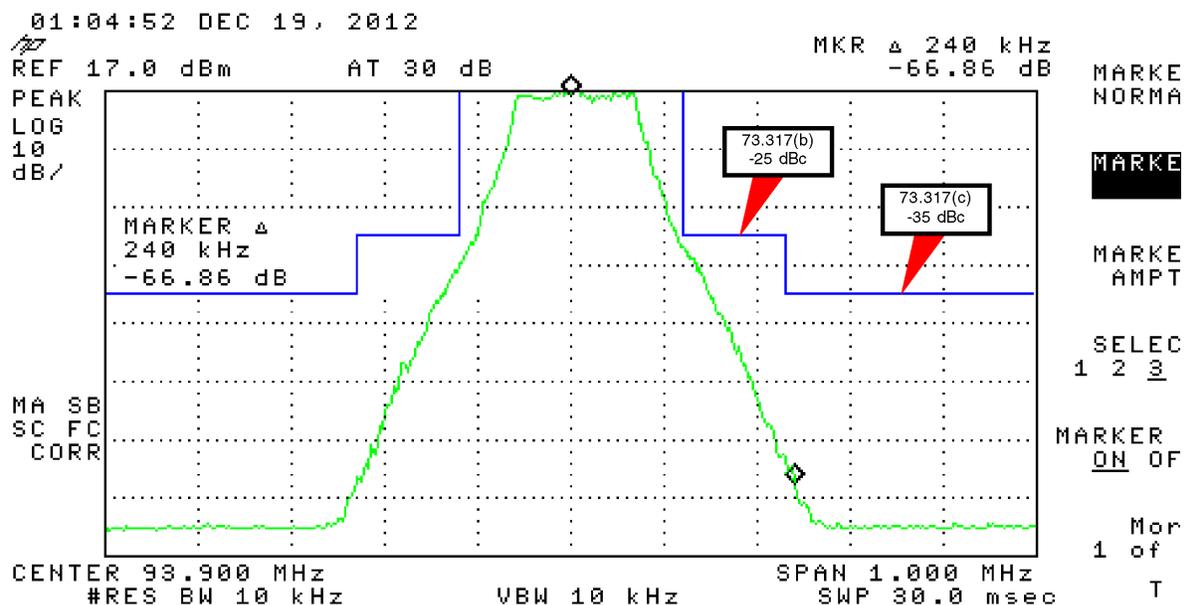


Figure 3 - WKYS 1 MHz Span

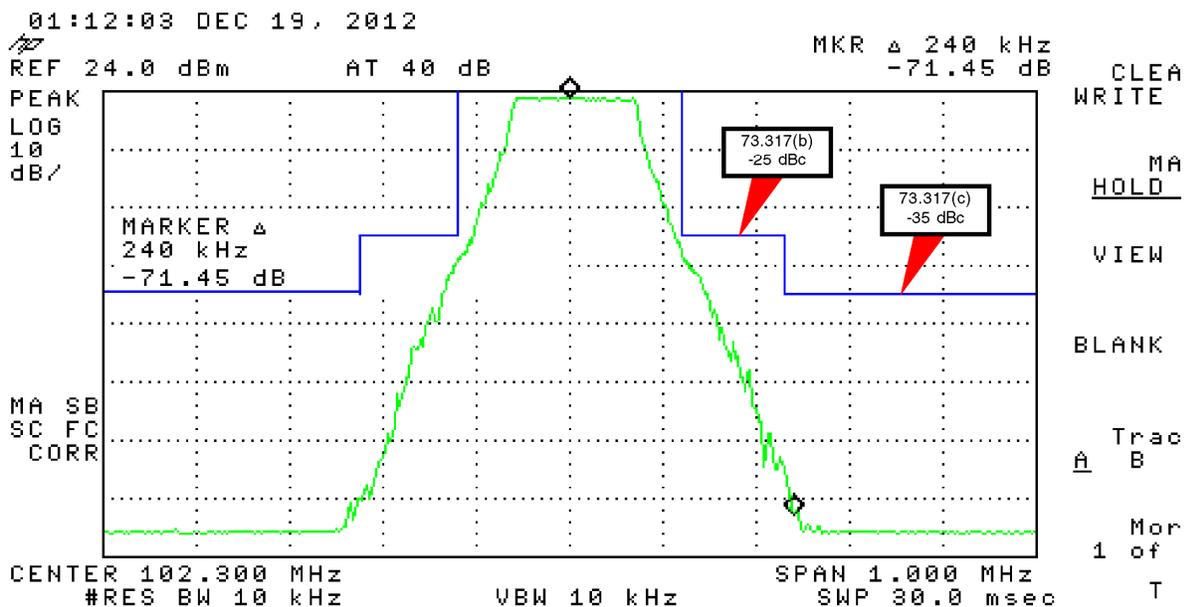


Figure 4 - WMMJ 1 MHz Span

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Compliance with the bandwidth limitations set forth in Sections 73.317(d) of the FCC Rules is demonstrated in the 10 MHz spectrum plots (Figures 5 and 6), provided below.

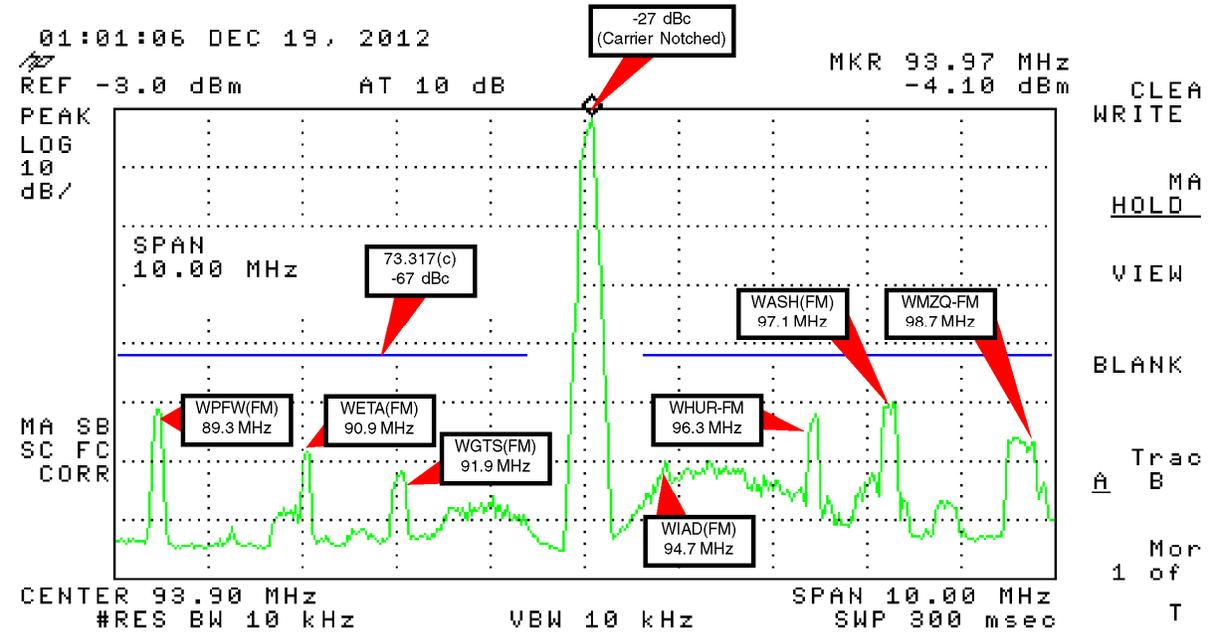


Figure 5 – WKYS 10 MHz Span

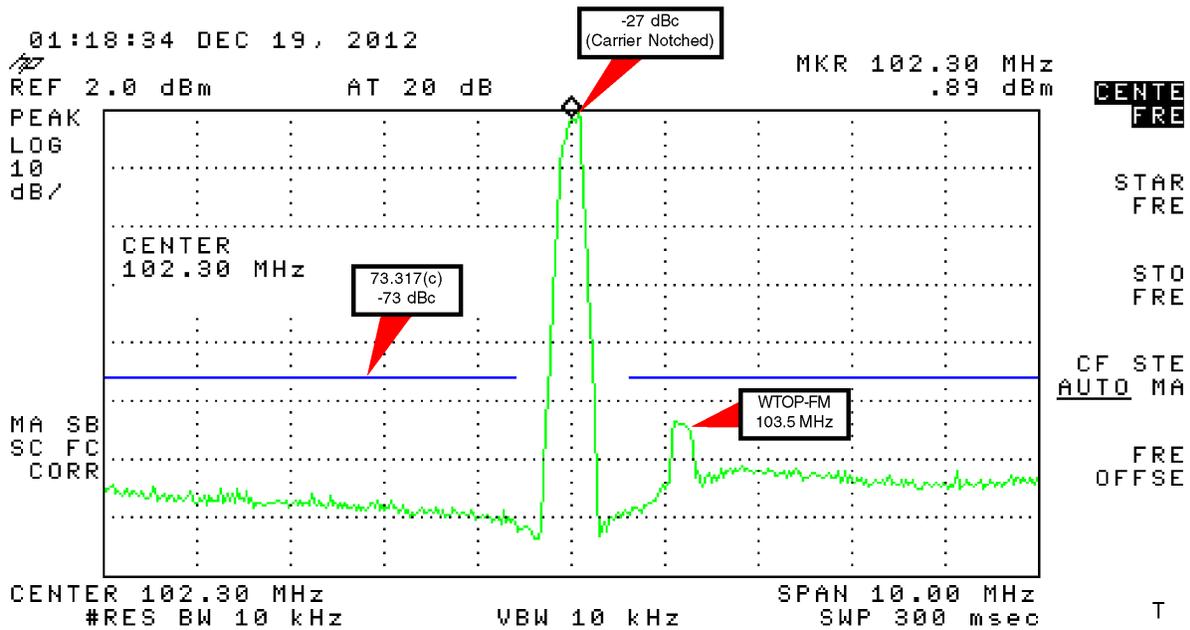


Figure 6 – WMMJ 10 MHz Span

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As shown, emissions more than 600 kHz removed from the WKYS and WMMJ carriers were found to comply with Section 73.317(d) of the FCC Rules.<sup>6</sup> Additionally, a scan of the spectrum between 108 MHz and 1.8 GHz was initiated. With the exception of legitimate signals from co-located or nearby broadcast stations, no indications of carriers was evident. Thus, it is believed that no significant spurious emissions from the WKYS and WMMJ operation exist.

### **Conclusion**

Therefore, based on the foregoing report and data contained herein, it is believed that the auxiliary antenna system employed by WKYS complies with Sections 73.317(b)-(d) of the FCC Rules and is in compliance with the *Special Operating Conditions* contained in the WKYS construction permit.

### **Certification**

The undersigned hereby certifies that the foregoing statement was prepared by him or under his direction, and that it is true and correct to the best of his knowledge and belief. Mr. Ryson is an engineer in the firm of *Cavell, Mertz & Associates, Inc.* and has submitted numerous engineering exhibits to the Federal Communications Commission. His qualifications are a matter of record with that agency.

Respectfully submitted,



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December 27, 2012

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<sup>6</sup> Emissions more than 600 kHz removed from the carrier, must be at least  $43+10\text{Log}(\text{Power}_{\text{in watts}})$  dB below the unmodulated carrier or 80 dB, whichever is the lesser. Notably, due to use of notch filters, WKYS and WMMJ carrier frequency amplitudes shown in **Figures 5** and **6** were attenuated by at least 27 dB from their actual values.