

**WEEB 990 kHz, Southern Pines NC**  
**Occupied Bandwidth Measurement**  
**December 31, 2016**

**Purpose.**

To confirm compliance by WEEB (AM) with 47 FR 73.44, *AM transmission system emission limitations*. Measurements were made on December 30, 2017. The results are detailed in this report.

**Equipment.**

- Agilent N9340B spectrum analyzer, Serial CN03488216, calibrated July, 2012
- Chris Scott & Associates LP-3 standard H-field antenna

**Location.**

A site was chosen that was free of overhead electrical lines and was positioned to minimize interference from a station in Sanford NC on 1050 KHz. The loop antenna was able to produce a thirty-five decibel null on WEEB, which suggested minimal local re-radiation. The measurements were made at the west end of Bentwood Ln approximately 0.77 kilometers from the WEEB tower as established by Google Earth and confirmed via Garmin GPS-60.

**Method.**

The above referenced equipment was set up and confirmed to be operating correctly. In 'peak hold' mode, two ten-minute continuous recordings of emissions from WEEB were made during the period from 11:47 AM to 12:42 PM on December 30, 2017. The data from those measurements were saved to memory for later reproduction.

**Results.**

A careful visual analysis of the captured waveforms confirmed that WEEB's emissions were attenuated in compliance with 47 CFR 73.44. Figures 1 & 2 (below) are an accurate representation of the captured waveforms.

In addition, a third measurement was taken using the same equipment setup but with the loop antenna oriented 90 degrees from the tower. As will be seen, background RF is nominally 70 dB below carrier level within the span of 1.0 MHz, suggesting that this RF is not being radiated from WEEB.

Finally, using the same equipment setup, readings were taken for all harmonics of WEEB from 2<sup>nd</sup> through 5<sup>th</sup>. No signals could be discerned on any of those frequencies.

**Qualifications.**

The undersigned made all preparations and measurements for this report. He is an experienced broadcast engineer having been involved in radio and television engineering since 1968. He has served as chief and assistant chief engineer for AM, FM and television stations as well as working with manufacturers and vendors of broadcast equipment in a technical capacity. He currently serves as engineering consultant to WEEB.

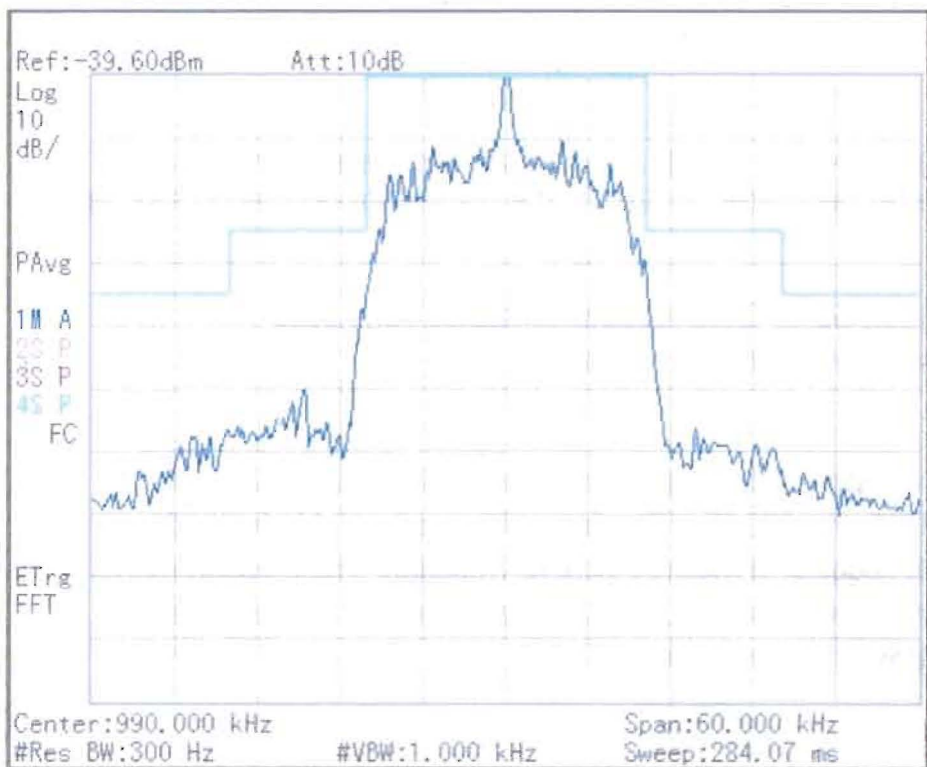


Figure 1.

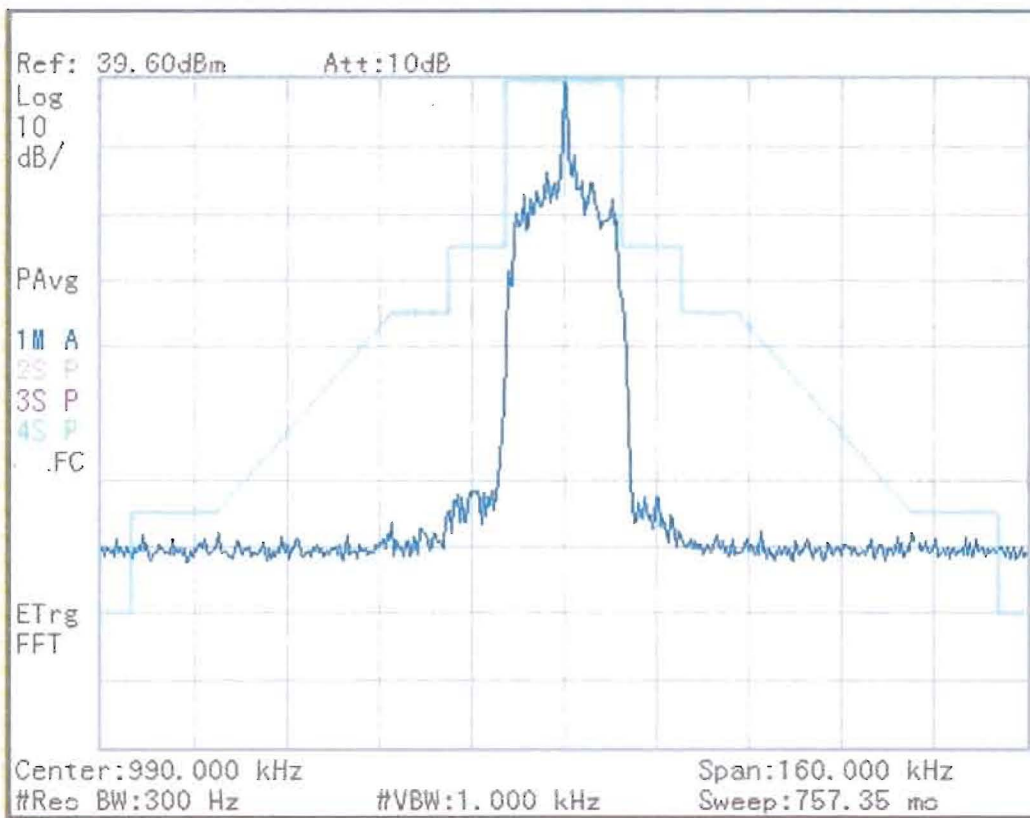


Figure 2.

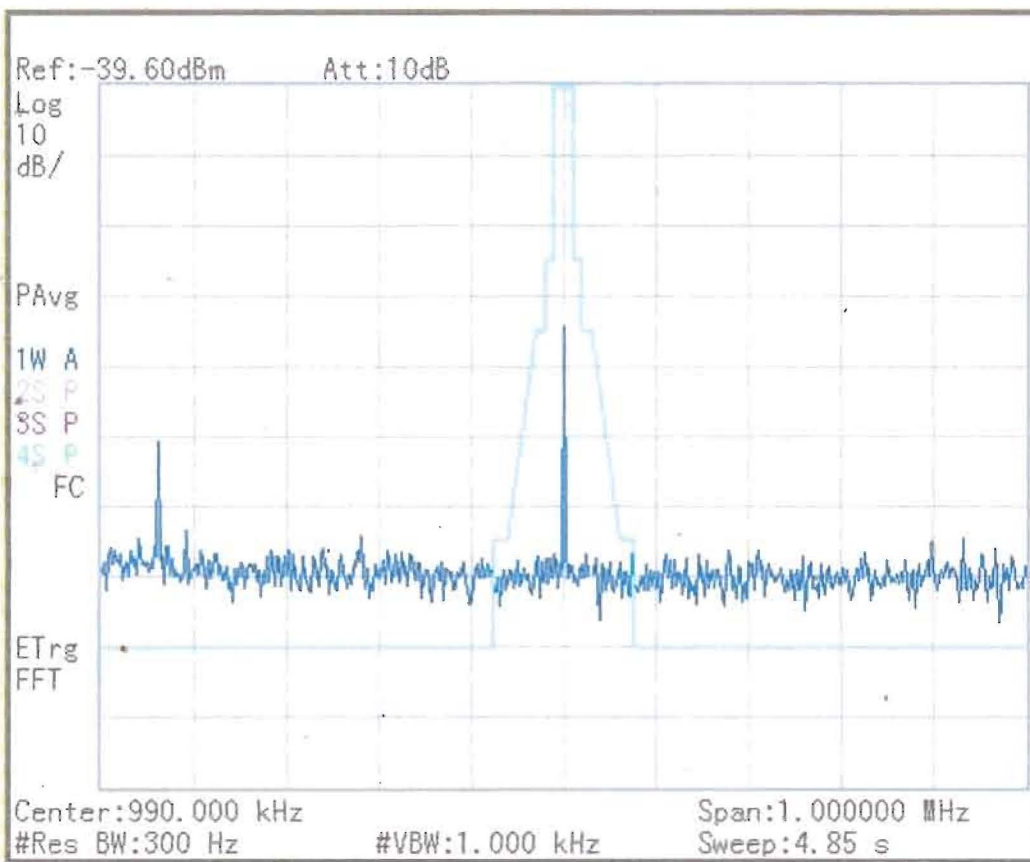
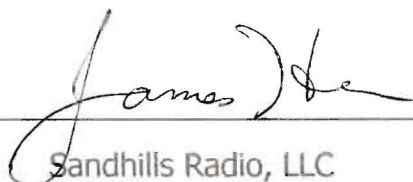


Figure 3.

The signature below certifies that all representations made in this report are true and correct to the best of the undersigned's knowledge.



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December 30, 2017

Sandhills Radio, LLC

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