

CONNER MEDIA CORPORATION

WEGG

ROSE HILL, NORTH CAROLINA

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CONNER MEDIA CORPORATION

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NARRATIVE

This Narrative, a detailed Table of Attachments and other engineering items are attached in this Exhibit (Exhibit 10). All engineering attachments are in order in Exhibits 10 through 16, as shown in the Table of Contents preceding this narrative.

This application is to increase the WEGG power from 0.25 kilowatt to 1.00 kilowatt. There is no nighttime operation.

There is no prohibited contour overlap with any other facility, authorization or application.

Field strength measurements were made on WEGG; WAQI, Miami, Florida; and WZOO, Asheboro, North Carolina. Particular attention was given to maintaining licensed antenna current at WZOO while measurements were made on that facility.

All field strength measurements were made by Lewis T. Crain and James M. Moody, both highly qualified to make such measurements by virtue of extensive instruction and several years of practice. Their declarations are included in this exhibit (Exhibit 10).

To facilitate field strength measurements on weak signals and in the presence of cochannel interference, a co-channel field strength measuring adapter (Cochannel Adapter) was used. This device and its operation are described in this exhibit.

All measurement data is applied to the calculation of contours at plus and minus 10 degrees of the measured azimuth, and all contours on allocation studies and coverage maps were calculated and plotted at one degree increments, except for the WOR study which was made at one half degree increments.

A calculation was made to the WOR 0.1 mV/m contour at 009 degrees and 403.3 kilometers (250.4 miles). Using the

procedure outlined in §73.187, it was determined that the permissible radiation on that azimuth during Critical Hours is approximately 1163 mV/m/kM. With such great clearance for the proposed power, no further calculations were made.

The ground system sketch and the tower sketch in Exhibit 14 are taken from a license application filed with the FCC May, 1975.

# James M. Moody and Associates

*Broadcast Technical Consultants*

December 7, 2003

## DECLARATION

RE: WAQI  
017 degrees

I declare under penalty of perjury, that I James M. Moody made the field strength measurements on radio station WAQI, contained in this exhibit. The measurements were made on the 017 degree radial. I further state that the data submitted is correct and factual to the best of my knowledge.

All measurements on WAQI were made with a Potomac Instruments model FIM-21 field strength meter, serial number 659. This meter was compared to one of recent calibration for accuracy.

Measurements were taken on June 26<sup>th</sup> and June 27<sup>th</sup> 1999 for Conner Media Corporation, licensee of WEGG.

Executed on December 7, 2003

A handwritten signature in blue ink that reads "James M. Moody". The signature is stylized with a large, looped "J" and "M".

Signed: James M. Moody  
*Endorsement Digitally Signed*

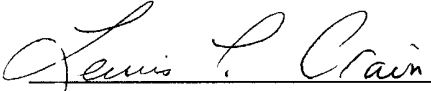
# **AFAB Enterprises, Inc.**

3639 Hwy 414  
Landrum, SC 29356  
(864) 895-1519

## **DECLARATION**

I declare under penalty of perjury that I personally made the field strength measurements contained in this application on stations WZOO Radial 128 degree, 148 degree, 168 degree; WEGG Radial 190 degree, 210 degree, 230 degree, 250 degree, 270 degree, 290 degree, 310 degree, 330 degree, and that this data is accurate to the best of my knowledge.

These measurements were made using Potomac Instruments FIM-41, Serial Number 535, calibrated on 26 January 2001.

  
\_\_\_\_\_  
Lewis T. Crain

Date 7-28-01

## THEORY AND OPERATION OF THE COCHANNEL

### FIELD STRENGTH MEASURING ADAPTER

A cochannel field strength measuring adapter was used to obtain reliable measurement data on weak signals and when confronted with cochannel interference. A Potomac Instruments FIM-21 or FIM-41 is used as the heart of the offset measurement system. In the absence of interference, the FIM is used in the normal manner. Where cochannel interference is observed, the cochannel adapter is used in conjunction with the FIM.

The adapter works as follows. The frequency of the applicant's station is shifted a maximum of 15 hertz high or low, depending on the frequency of interfering stations. The FIM is calibrated according to the manufacturer's instructions. Then the output of a crystal controlled frequency synthesizer is injected into the front panel BNC connector on the FIM to a level approximately three times greater than the level of the desired signal. The frequency of the synthesizer is set 12 hertz higher or lower than the desired signal, generating a beat note of 12 hertz.

Under these conditions, the recorder output jack of the Potomac FIM provides a band-limited signal consisting of the audio beat notes of the synthesizer, the desired signal, and any undesired signals on the same channel. These beat notes are sinusoidal in nature and proportional to the strength of the incoming signals. These signals are then passed to a Switched Capacitor Filter with a window centered on 11.7 hertz. The selectivity skirt of the filter is down 50 decibels at  $\pm 3$  hertz.

The output of the filter is then fed to a Hewlett-Packard 403B precision audio voltmeter which has a rated accuracy down to 10 hertz. The filter output has a precision ten-turn potentiometer that permits the filter output to be adjusted so that the voltage on the audio voltmeter tracks with the meter on the FIM when calibrated in an interference-free environment.

The cochannel adapter is placed in service at a distance where the interfering signal just begins to cause a slight swing in the meter on the FIM, usually 0.05 mV/m to 0.1 mV/m. At this point, the voltage on the adapter can be compared to that of the FIM to confirm proper operation.



## COCHANNEL FIELD STRENGTH MEASURING ADAPTER...(continued)

Any ambiguity between the frequency of the desired and undesired station is eliminated by comparing the readings on the FIM and on the adapter for several succeeding measurement points, and by asking the client station, via mobile telephone, to cut the carrier for several seconds to confirm that the adapter is actually measuring the desired signal. At this point, the operator has a clearly defined set of operating parameters with very high confidence.

Laboratory checks have shown that the readings on the cochannel adapter are virtually indistinguishable from the readings on the FIM across the 100 microvolt and the 1 millivolt attenuator ranges of the FIM (the only ranges applicable to this use).

Although the Potomac Instruments FIM-21 and FIM-41 have a lower limit of 10 microvolts, it was found during laboratory tests that the adapter permitted accurate measurement of signals as low as 2 microvolts. These measurements were confirmed by measuring a signal from a signal generator at 50 microvolts on the FIM, reducing the signal generator output to 2 microvolts with a precision attenuator and then measuring the signal on the adapter.