Exhibit C
Tabulation and Graphical Analysis
of Measured Data

prepared May 2001 for
Willow Farm, Inc.
WNSH Beverly, Massachusetts
1570 kHz 0.5 kW U DA-2

Radial Summary Tabulation				
Radial	**Standard Pattern**	**Non-directional Analyzed Unattenuated Field Strength @ 1 km**	**Measured DA Field**	**Percent of Standard Pattern**
(degrees True)	(mV/m)	(mV/m)	(mV/m)	
10	181.8	115	107.9	59.35%
60	269.6	120	187.9	69.70%
176.5	15.9	110	15.18	95.47%
241.5	130.2	120	62.86	48.28%
274	275.6	115	177.9	64.55%
306	303.6	115	197.5	65.05%
338	225.4	120	154.5	68.54%
RMS	210.0	116.5	136.8	65.14%

Following of construction of the antenna system, the phasing system was set to the theoretical parameters for the daytime antenna system as submitted in FCC form 302-AM, Section III. The common point impedance was set using a Delta OIB-1 Operating Impedance Bridge to 52.5 j0 ohms, which provided minimum reflected power as indicated on the transmitter metering. Transmitter output power was adjusted to 3.24 Amps at the common point for the proof. [3.24^2 X 52.5 = 551.1 Watts]

Tower 2, the center tower, is utilized as the non-directional radiator for the proof of performance. Towers 1 and 3 are disconnected, or "floated" as a means of effective de-tuning for radiators of less than 90° electrical height. The Non-directional base impedance of tower 2 was measured at the output J-plug of the tower 2 antenna tuning unit following all electrical components using a Delta OIB-1. The impedance at this point with all other towers floated was 12.8 - j 27.0 ohms.

Initial non-directional measurements were taken with the transmitter output power adjusted to 25% of the operating power authorized in the cp as proscribed in §73.1610 and §73.1615 of the rules. It was determined at that time that due to lower than predicted ground soil conductivities in the area that additional non-directional power would be necessary to obtain measurements at

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distances required by the rules. Accordingly, WFI requested and was granted by letter dated April 25, 2001, an STA to conduct the non-directional proof of performance measurements at an output power of 350 watts. Accordingly, the non-directional measurements for the instant proof were taken with the non-directional tower base current set to 5.23 Amps. [5.23^2 X 12.8 = 350.1 watts].

As discussed in WFI's request for increased non-directional power, to reduce the potential for objectionable interference to co-channel WPEP, Taunton, MA, and to ensure that all directional and non-directional measurements are made under similar environmental conditions as required in the rules; the proof was conducted using a pattern switching technique. The transmitter and phasor were left normally in the directional mode. As each measurement point was located, a directional field intensity reading was made and then the pattern was switched to the non-directional mode for the Non-DA reading within just a few minutes. The pattern was then immediately returned to the DA mode in preparation of the next reading. This method minimized the amount of time that the amount of time that WNSH operated with 350 watts and provided the most stable environment for the phasing system to operate. The exception to this method occurred only when WNSH conducted near field measurements, during which time, the transmitter was operated in a continuous 350 watt, non-directional mode.

The proof was conducted on 7 radial bearings as shown in the Summary Tabulation above. The 10° True and 176.5° True radials were proscribed in the original construction permit as being required as Monitor Point radials for the daytime pattern minima. The remaining radials were chosen more or less equally spaced about the land mass served by WNSH to best define the shape of the WNSH pattern, and are believed to be within the guidelines set forth in the rules as recently amended. On each radial as many measurements were taken as reasonablely possible to define the radiated field in that direction, as required in §73.186, at least 7 non-directional points within 3 km, and 15 points in both the directional and non-directional mode were taken between 3 and 15 km. On some radials, where field strengths fall below 0.25 mV/m prior to reaching 15 km in either the directional or non-directional mode due to low conductivities, the requisite number of points are reported out to the maximum distance possible while maintaining readings above 0.25 mV/m. In some cases this has resulted in the proper number of points being reported within distances of 12 to 13 km. It is believed that data collected at field strengths below such values were subject to co-channel interference which rendered that more distant data unreliable.

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The span between the 60° True radial and the 176.5° True Monitor Point radial exceeds the 90° radial spacing as set forth in §73.151(a)(iii) as amended. It is noted that over that arc, the WNSH pattern extends out into the Atlantic Ocean and over a vast majority of that arc never touches land over US territory after leaving shore. In choosing the 60° True radial, it was determined that although other directions clockwise toward the 176.5° MP radial might have been measured, they would have been prematurely truncated by the coastline and that 60° True provided the last full length radial which could be expected to provide repeatable measurement data. Therefore to more accurately define the pattern which extends over a land mass, radial measurements were taken more frequently on the west side of the pattern. If a **waiver** of the 90° radial separation requirement **of §73.151(a)(iii)** or any other pertinent rule is required, WFI respectfully requests such waivers.

Additional radials were chosen to provide what was believed to be the largest number of accessible measurement points to accurately define the radiated pattern.

Overall, measurements were taken under as similar environmental conditions as possible, temperatures for the period varied between 50 and 65 degrees during the proof period, and as described above, measurements at any given point used for ratio purposes were taken simultaneously. The only exception to this was during the latter days of the proof when non-directional near field measurements were being taken and temperatures during mid-day rose into the mid-70's. Since near field measurements are the least effected by ground soil conductivity, it is not believed that the slightly higher temperatures made an impact on the results of the measurement procedure.

All measurements were conducted by, or under the supervision of, Curtis L. Perryman, President of Perryman Consulting, Inc., whose qualifications for conducting such measurements are a matter of record with the Federal Communications Commission. Also taking measurements under his supervision was Mr. Gregory Lynam, Director of Engineering for WFI and Chief Operator for WNSH.

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Field intensity measurements were made using the following instruments:

Manufacturer	Model	Serial Number	calibration date
Potomac Instruments	FIM-21	584	7 March, 2001
Nems Clark	FIM-120	1492	Unknown

The calibration date on the Nems Clark field meter is unknown, however, it was compared on all scales against the newly calibrated FIM-21 and all readings were found to be within ±2% between the two instruments.

The measured RMS of the WNSH daytime antenna system is 136.8 mV/m. A waiver request of minimum antenna efficiency is included in the Engineering Statement portion of this application.