4004 Main Street
Brown City, MI 48416
(810) 346-2200
(810) 346-4440 Fax
tmuxlow@btwireless.net
muxlowsurveying.com

MUXLOW
SURVEYING &
ENGINEERING

August 31, 2007

Superior Communications
Attn: Mr. Ed Czelada
3302 Van Dyke Road
Imlay City, MI 48444

Re: Directional Antenna orientation for WEJC near Auburn, MI

Dear Mr. Czelada,

On August 30, 2007 we measured the azimuth of the antenna located east of Garfield Road, south of River Road near Auburn, Michigan, with a compass and have adjusted the magnetic reading for the declination on that date and for that location to produce the true azimuth. The true azimuth of the antenna is 264°.

If you have questions or concerns, please contact me at the number above.

Sincerely,

Tricia A. Muxlow
Professional Surveyor #51473

STATE OF MICHIGAN
TRICIA A. MUXLOW
PROFESSIONAL SURVEYOR
NO. 51473
LICENSED PROFESSIONAL SURVEYOR

Declaration of Edward T. Czelada

Edward T. Czelada hereby declares and says:

I prepared the application for construction permit and license to cover for WEJC. I have been a consulting engineer since 1991 and have prepared numerous broadcast applications before the FCC. I have been directly involved with design, development and installation of broadcast antennas and RF transmission systems for the last twenty-one years. I taught State of Michigan accredited electronics classes from 1993 to 1996. I also hold a technician's class license and have been involved in electrical engineering and manufacturing.

That I supervised the installation of the WEJC directional antenna system and that it has been installed properly in accordance with instructions and specifications.

I also certify that the antenna was installed at the proper height and rotated to a proper azimuth as to comply with FCC requirements (see surveyors statement).

That all the statements contained within this exhibit are true and accurate to the best of my knowledge and belief.

Respectfully submitted by:

Ed Czelada

Edward T. Czelada
3302 N. Van Dyke Rd.
Imlay City, MI 48444
(810) 724-2638
August 30, 2007

ETC Communications

3302 N. Van Dyke Rd.
Imlay City, MI 48444
(810) 724-5093
www.voicetracking.com

Report of Test FM-6V-DA-Special (Slant)
For
Superior Communications, WEJC 88.3 MHz White Star, MI

OBJECTIVE:

The objective of this test was to demonstrate the directional characteristics of a FM-6V-DA-Special (Slant) to meet the needs of WEJC and to comply with the requirements of the FCC construction permit, file number BPED-20061205AEF.

RESULTS:

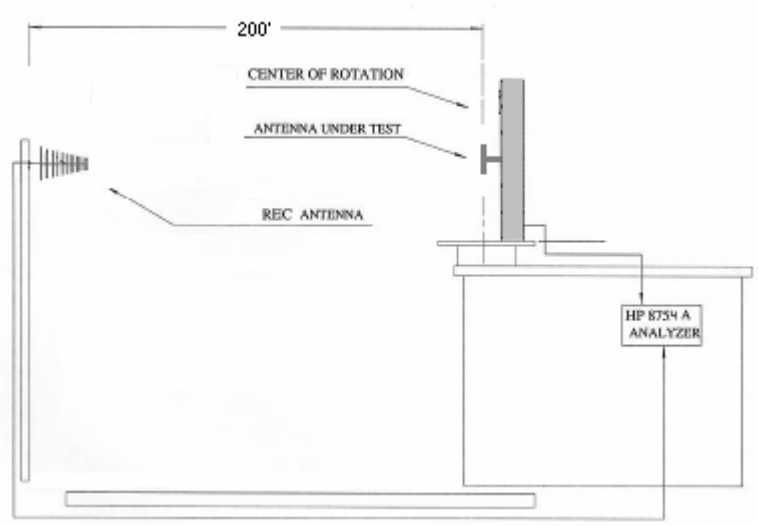
The measured azimuth pattern for the FM-6V-DA-Special (Slant) is shown in Figure 2. Figure 1 shows the Tabulation of the Vertical Polarization. The horizontal component of this antenna was developed by constructing the dipole 0.01° off of vertical. The horizontal azimuth pattern of this antenna is omni-directional and therefore is not shown. The calculated elevation pattern of the antenna is shown in Figure 3. Construction permit file number BPED-20061205AEF indicates that the Vertical radiation component shall not exceed 55 kW at any azimuth.

From Figure 1, the maximum radiation of the Vertical component occurs at 220 Degrees T. At the restricted azimuth of 85 Degrees T the Vertical component is 9.6 dB down from the maximum of 55 kW, or 6.03 kW.

The total Horizontal power gain is 0.000182. The R.M.S. of the Vertical component is 0.74576. The total Vertical power gain is 5.623228. See Figure 4 for calculations. The R.M.S. of the FCC composite pattern in construction permit BPED-20061205AEF is 0.87562811. Therefore this Pattern complies with the FCC requirement of 73.316(c)(2)(ix)(A).

METHOD OF DIRECTIONALIZATION:
One bay of the FM-6V-DA-Special (Slant) dipole-type antenna was mounted on a tower of exact scale to the Rohn 80 series tower present at site. The spacing and mounting angle of the antenna in relation to the tower was varied to achieve the azimuth pattern shown in Figure 2. See Figure 5 for mechanical details.

METHOD OF MEASUREMENT:
As allowed by the construction permit, file number BPED-20061205AEF, a single level of the FM-6V-DA-Special (Slant) was set up on a rural "quiet zone" 80-acre antenna pattern measuring range, a scale of 1:1 was used.



EQUIPMENT:
The full-scale model pattern range consists of a rotating device equipped with an electronic position indicator. The full-scale tower section is placed on the top of rotating device and is used in the transmission mode at approximately 20 feet above ground level. A small diameter wooden support structure holds a broadband FM receiving yagi antenna that is spaced 200 feet away from the rotating device at the same level above ground as the transmitting antenna. The transmitting and receiving signals are carried to a control area by means of RG-8 type and RG-6 type double-shielded coax cables, respectively. The control area is equipped with: Hewlett Packard Model 8754A Network Analyzer. The test equipment is calibrated to ANSI/NCSL Z540-1-1994.

TEST PROCEDURES:
The network analyzer was set to the frequency of 88.3 MHz. Calibrated physical markers are used to check the linearity of the measuring system. From the recorded patterns, the R.M.S. values are calculated and recorded as shown in Figure 4.

Respectfully submitted by:
Ed Czelada
Edward T. Czelada
ETC Communications
August 21, 2007

Figure 1
TABULATION OF VERTICAL POLARIZATION
WEJC WHITE STAR, MI
MODEL FM-6V-DA-Special (Slant)

Degrees	Vertical Field	FCC Field
0	0.912	1.000
10	0.794	1.000
20	0.676	1.000
30	0.537	1.000
40	0.417	0.794
50	0.339	0.631
60	0.309	0.501
70	0.316	0.398
80	0.331	0.346
90	0.331	0.346
100	0.316	0.412
110	0.282	0.477
120	0.251	0.542
130	0.251	0.608
140	0.324	0.673
150	0.437	0.739
160	0.525	0.930
170	0.631	1.000
180	0.759	1.000
190	0.933	1.000
200	0.989	1.000
210	1.000	1.000
220	1.000	1.000
230	1.000	1.000
240	0.989	1.000
250	0.977	1.000
260	0.933	1.000
270	0.912	1.000
280	0.881	1.000
290	0.871	1.000
300	0.881	1.000
310	0.902	1.000
320	0.923	1.000
330	0.955	1.000
340	0.977	1.000
350	0.966	1.000

Figure 2
POLAR PLOT OF VERTICAL POLARIZATION
WEJC WHITE STAR, MI
MODEL FM-6V-DA-Special (Slant)

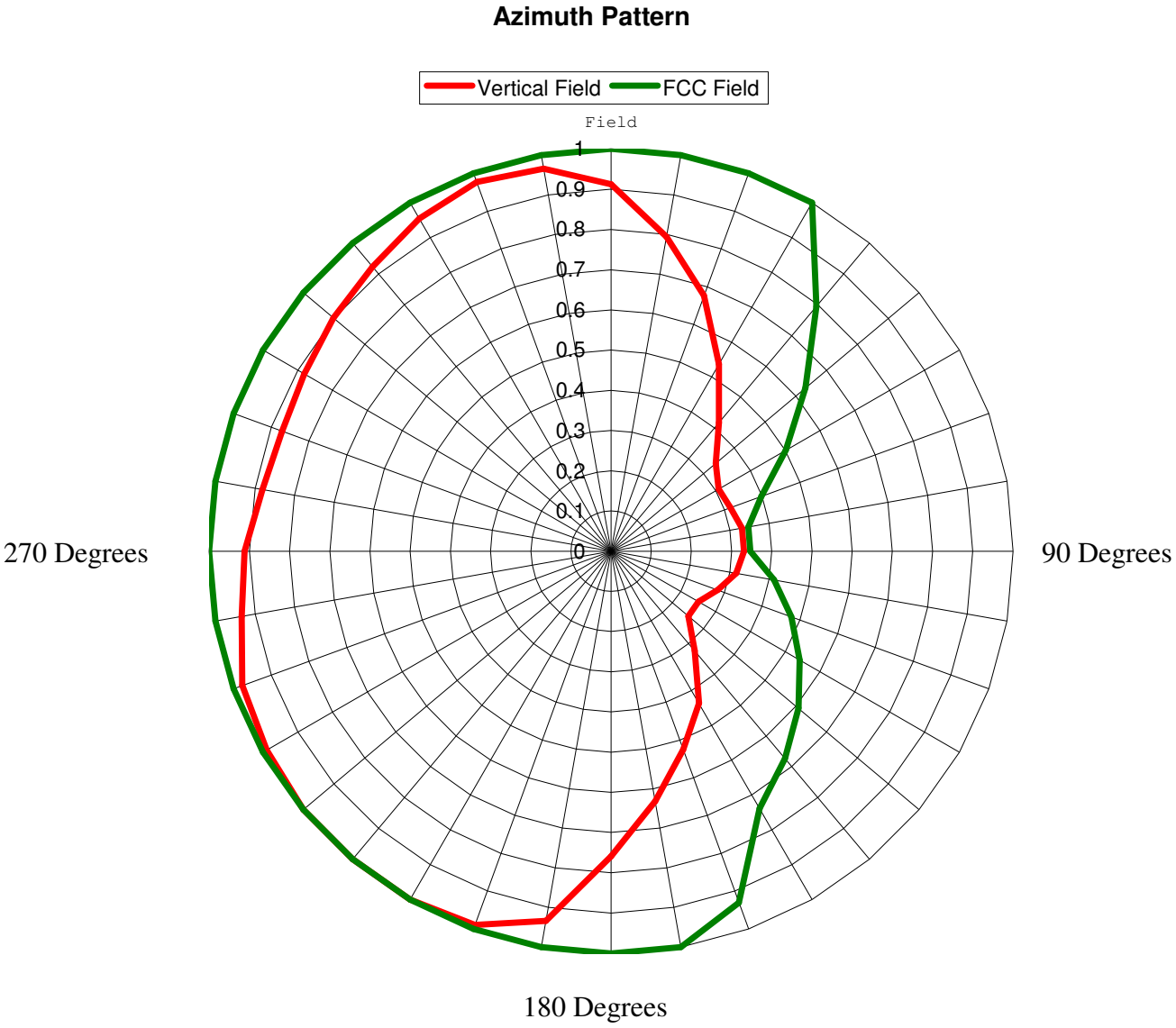


FIGURE 3
Vertical Pattern
WEJC WHITE STAR, MI
MODEL FM-6V-DA-Special (Slant)

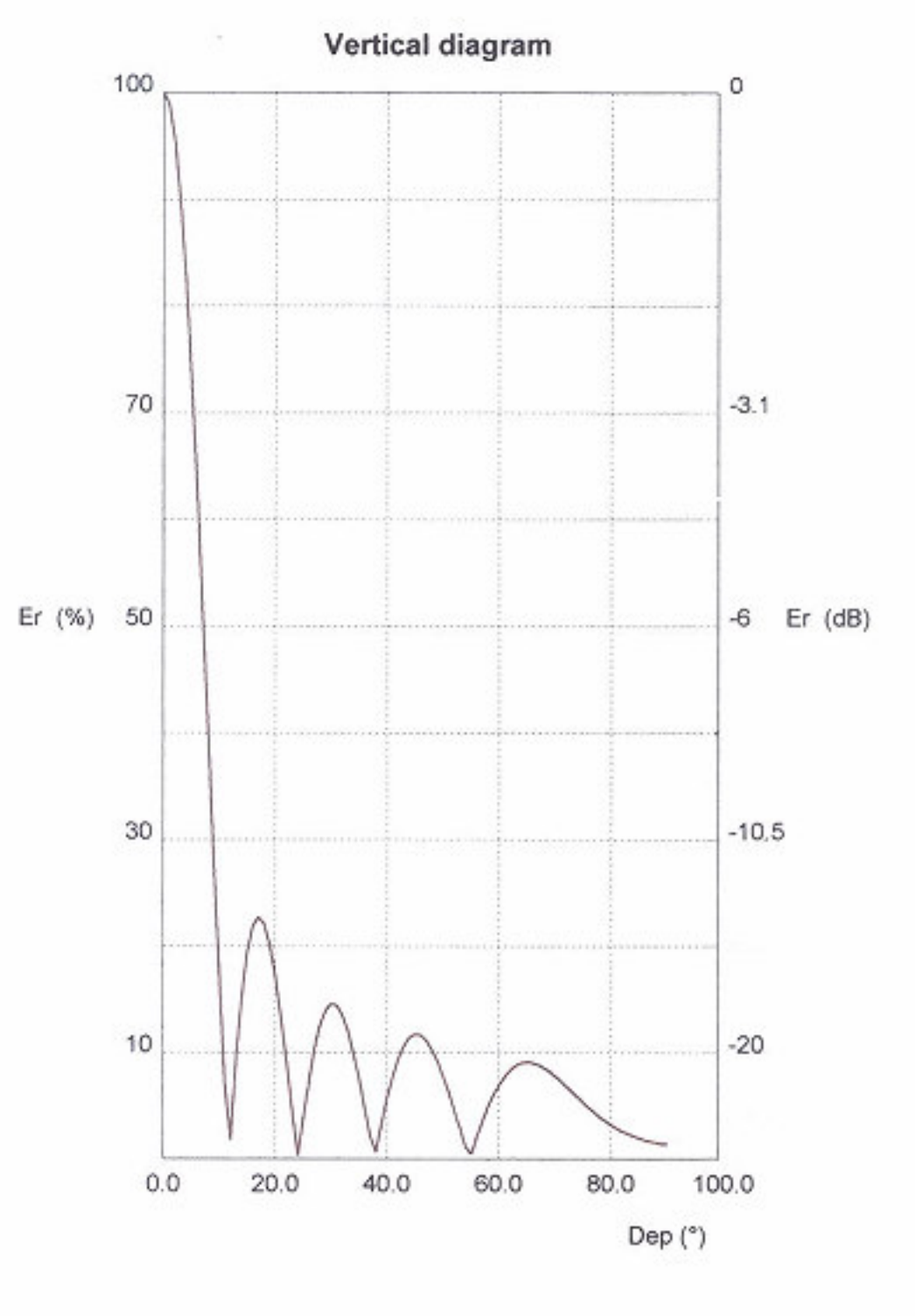


FIGURE 4
VALIDATION OF GAIN CALCULATION
WEJC WHITE STAR, MI
MODEL FM-6V-DA-Special (Slant)

Elevation Gain of FM-6V-DA-Special (Slant) equals Vertical 5.623228

The RMS values are calculated utilizing the data of a planimeter.

Elevation Gain of Vertical Component equals 5.623228

Vertical Azimuth Gain equals $1/(RMS)^2$
$1/(0.74576)^2 = 1.79805$

* Total Horizontal Gain is 0.000182

* Total Vertical Gain is Elevation Gain times Azimuth Gain
5.623228 x 1.79805 = 10.11

ERP divided by Vertical Gain equals Antenna Input Power
55 kW ÷ 10.11 = 5.4395 kW

Antenna Input Power times Horizontal Gain equals Horizontal ERP
5.4395 kW x 0.000182 = 0.00099 kW

FIGURE 5
Antenna Mounting and Orientation
WEJC White Star, MI
MODEL FM-6V-DA Special (Slant)