PATTERN CERTIFICATION

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PATTERN CERTIFICATION

Method of Measurement

The azimuth pattern for "WKSL", Dielectric Document Sketch #23, was measured in the following manner.

A single 4.4 to1 scale model "DCRM6ERD" bay radiator was mounted on a similarly scaled model of the tower according to information provided to Dielectric by the customer; refer to Dielectric Document Sketch #23. The antenna under test, all parasitics, all known tower appurtenances, and the tower section were rotated through 360 degrees while receiving a signal at the appropriate frequency from a linear cavity-backed source antenna. Both the horizontal and vertical polarization azimuth patterns were measured in an anechoic test range.

The transmit and scale model antennas are mounted at identical elevations and at opposite ends of the chamber. A Hewlett Packard model 8752C network analyzer was used to supply the RF signal to the source antenna at 4.4 times the fundamental FM frequency and to receive the signal intercepted by the antenna under test. The received signal was converted to a relative level, referenced to the source. This level was stored on a computer acting as the master controller. The computer controls the measurement system via IEEE-488 control bus through a GPIB card.

Statement of Qualifications

Keith L. Pelletier is a Senior Electrical Engineer here at Dielectric. He received a BS in Electrical Engineering Technology from the University of Maine in 1998. He has over 8 years experience in RF antenna engineering and has been employed by Dielectric Communications since 1997.

Signed By: KLP Digitally signed by KLP
DN: CN = KLP, C = US, O = Dielectric Communications, OU = SPX
Date: 2007.08.31 08:45:00 -04'00'

Date: _____

MSO NO:

DATE: August 16, 2007

PATTERN NO: 23

FM AZIMUTH PATTERN APPROVAL

The azimuth pattern of the horizontal polarization and vertical polarization as supplied by Dielectric in the document labeled " Pattern 23 ", is acknowledged as acceptable. We understand that Dielectric does not guarantee or predict signal strength in any particular location.

_____
(Customer's name)

By: _____
(Name typed or printed)

Title: _____

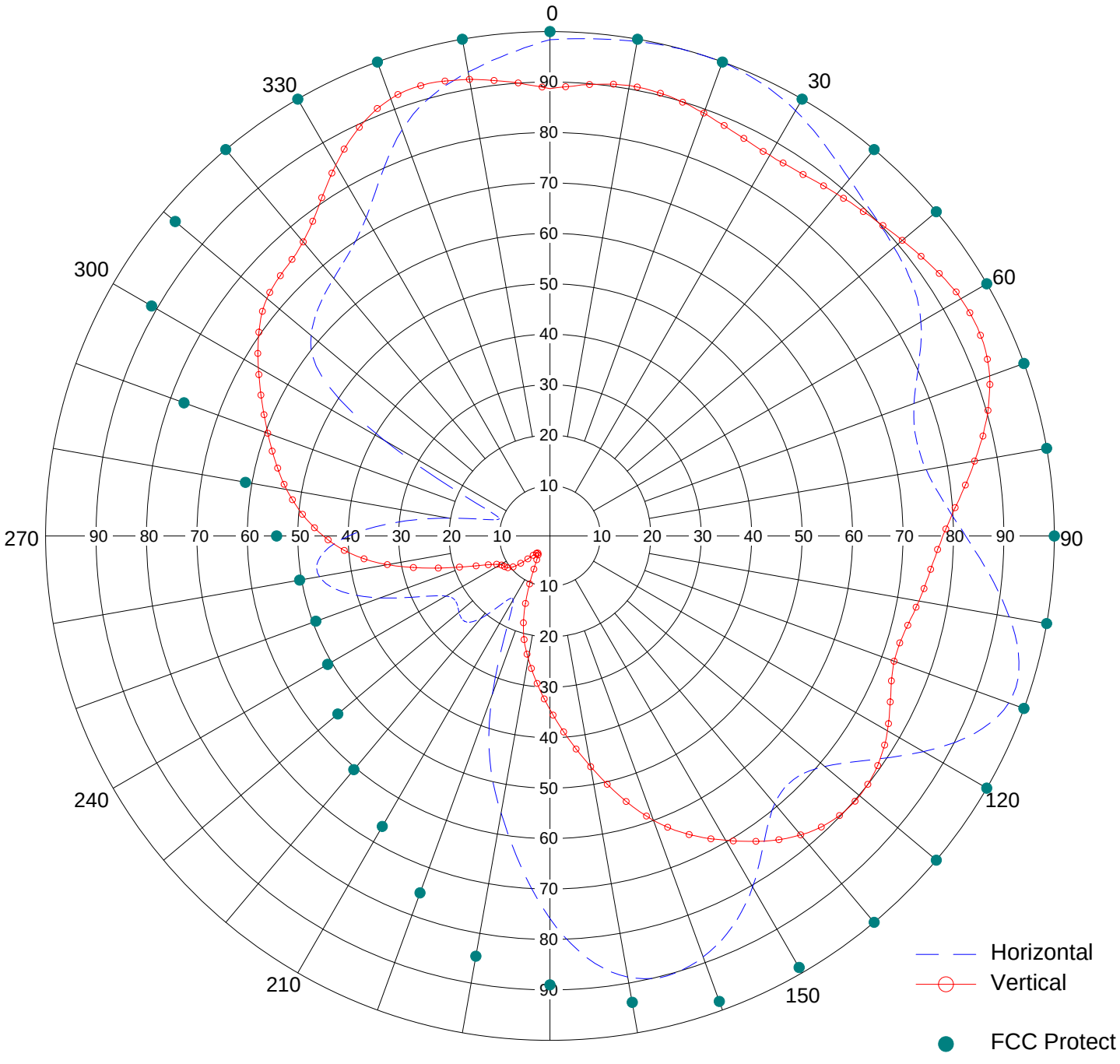
_____
(Signature)

Date	**Aug 16, 2007**
Call Letters	**WKSL**
Location	**Cary, NC**
Customer	**Clear Channel**
Antenna Type	**DCRM6ERD**

AZIMUTH PATTERN

85.5% Ccov - 51.2% Hrms - 48.8% Vrms

Gain	**1.93 (2.86) HPOL 1.88 (2.74) VPOL**	Frequency	**93.9 MHz**
Calculated / Measured	**Measured**	Drawing #	**23**



Remarks: Antenna Leg Mounted with one horizontal Parasitic

Dielectric

Proposal Number	
Date	**16-Aug-07**
Call Letters	**WKSL**
Location	**Cary, NC**
Customer	**Clear Channel**
Antenna Type	**DCRM6ERD**
Frequency	**93.90 MHz**
Drawing #:	**23**

TABULATION OF VERTICAL AZIMUTH PATTERN

Angle	Field	dBk	ERP kW
0	0.887	18.958	78.677
10	0.907	19.152	82.265
20	0.892	19.007	79.566
30	0.872	18.810	76.038
40	0.885	18.939	78.323
50	0.912	19.200	83.174
60	0.941	19.472	88.548
70	0.928	19.351	86.118
80	0.855	18.639	73.103
90	0.779	17.831	60.684
100	0.743	17.420	55.205
110	0.726	17.219	52.708
120	0.773	17.764	59.753
130	0.802	18.083	64.320
140	0.774	17.775	59.908
150	0.697	16.865	48.581
160	0.600	15.563	36.000
170	0.464	13.330	21.530
180	0.344	10.731	11.834
190	0.247	7.854	6.101
200	0.142	3.046	2.016
210	0.050	-6.021	0.250
220	0.048	-6.375	0.230
230	0.095	-0.446	0.903
240	0.114	1.138	1.300
250	0.178	5.008	3.168
260	0.327	10.291	10.693
270	0.449	13.045	20.160
280	0.530	14.486	28.090
290	0.596	15.505	35.522
300	0.668	16.496	44.622
310	0.733	17.302	53.729
320	0.761	17.628	57.912
330	0.849	18.578	72.080
340	0.923	19.304	85.193
350	0.919	19.266	84.456

Dielectric

Proposal Number	
Date	**16-Aug-07**
Call Letters	**WKSL**
Location	**Cary, NC**
Customer	**Clear Channel**
Antenna Type	**DCRM6ERD**
Frequency	**93.90 MHz**
Drawing #:	**23**

TABULATION OF HORIZONTAL AZIMUTH PATTERN

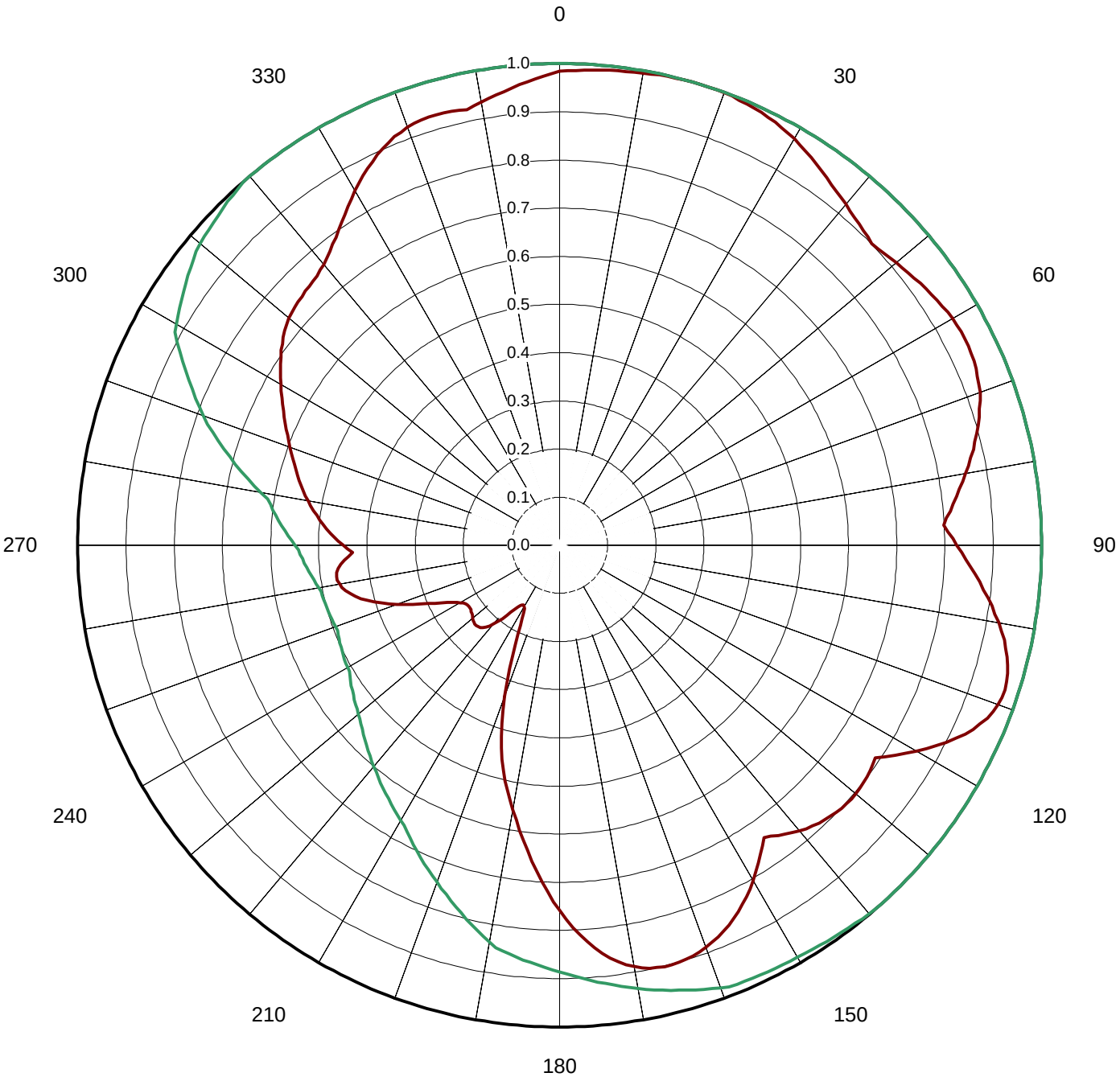
Angle	Field	dBk	ERP kW
0	0.984	19.860	96.826
10	0.995	19.956	99.003
20	0.999	19.991	99.800
30	0.974	19.771	94.868
40	0.924	19.313	85.378
50	0.890	18.988	79.210
60	0.849	18.578	72.080
70	0.768	17.707	58.982
80	0.758	17.593	57.456
90	0.824	18.319	67.898
100	0.925	19.323	85.563
110	0.968	19.718	93.702
120	0.855	18.639	73.103
130	0.711	17.037	50.552
140	0.693	16.815	48.025
150	0.803	18.094	64.481
160	0.888	18.968	78.854
170	0.888	18.968	78.854
180	0.758	17.593	57.456
190	0.558	14.933	31.136
200	0.334	10.475	11.156
210	0.146	3.287	2.132
220	0.214	6.608	4.580
230	0.235	7.421	5.523
240	0.238	7.532	5.664
250	0.359	11.102	12.888
260	0.464	13.330	21.530
270	0.399	12.019	15.920
280	0.204	6.193	4.162
290	0.109	0.749	1.188
300	0.379	11.573	14.364
310	0.618	15.820	38.192
320	0.667	16.483	44.489
330	0.729	17.255	53.144
340	0.857	18.660	73.445
350	0.934	19.407	87.236

Dielectric

Proposal Number		Revision:	1
Date	**Aug 16, 2007**		
Call Letters	**WKSL**		
Location	**Cary, NC**		
Customer	**Clear Channel**		
Antenna Type	**DCRM6ERD**		

COMPOSITE AZIMUTH PATTERN

Calculated / Measured	**Measured**	Frequency	**93.90 MHz**
		Drawing #	**23**



Dielectric

Proposal Number	
Date	**16-Aug-07**
Call Letters	**WKSL**
Location	**Cary, NC**
Customer	**Clear Channel**
Antenna Type	**DCRM6ERD**
Frequency	**93.90 MHz**
Drawing #:	**23**

TABULATION OF COMPOSITE AZIMUTH PATTERN

Angle	Field	dBk	Power kW	Input Power
0	0.984	19.860	96.826	100.000
10	0.995	19.956	99.003	100.000
20	0.999	19.991	99.800	100.000
30	0.974	19.771	94.868	100.000
40	0.924	19.313	85.378	100.000
50	0.912	19.200	83.174	100.000
60	0.941	19.472	88.548	100.000
70	0.928	19.351	86.118	100.000
80	0.855	18.639	73.103	100.000
90	0.824	18.319	67.898	100.000
100	0.925	19.323	85.563	100.000
110	0.968	19.718	93.702	100.000
120	0.855	18.639	73.103	100.000
130	0.802	18.083	64.320	100.000
140	0.774	17.775	59.908	100.000
150	0.803	18.094	64.481	100.000
160	0.888	18.968	78.854	100.000
170	0.888	18.968	78.854	100.000
180	0.758	17.593	57.456	100.000
190	0.558	14.933	31.136	100.000
200	0.334	10.475	11.156	100.000
210	0.146	3.287	2.132	100.000
220	0.214	6.608	4.580	100.000
230	0.235	7.421	5.523	100.000
240	0.238	7.532	5.664	100.000
250	0.359	11.102	12.888	100.000
260	0.464	13.330	21.530	100.000
270	0.449	13.045	20.160	100.000
280	0.530	14.486	28.090	100.000
290	0.596	15.505	35.522	100.000
300	0.668	16.496	44.622	100.000
310	0.733	17.302	53.729	100.000
320	0.761	17.628	57.912	100.000
330	0.849	18.578	72.080	100.000
340	0.923	19.304	85.193	100.000
350	0.934	19.407	87.236	100.000

Proposal Number	
Date	**Aug 31, 2007**
Call Letters	**WKSL**
Location	**Cary, NC**
Customer	**Clear Channel**
Antenna Type	**DCRM6ERD**
Frequency	**93.90 MHz**
Drawing #	**23**

CUSTOMER GAIN SUMMARY

Azimuth Pattern Gain of Horizontal Polarization	**1.92**	**(2.83 dB)**
Elevation Pattern Gain Per Polarization	**3.00**	**(4.77 dB)**
Peak Gain at Horizontal Polarization	**5.76**	**(7.60 dB)**

Proposal Number	
Date	**31-Aug-07**
Call Letters	**WKSL**
Location	**Cary, NC**
Customer	**Clear Channel**
Antenna Type	**DCRM6ERD**
Drawing #	

ELEVATION PATTERN

RMS Gain at Main Lobe	**3.00 (4.77 dB)**	Beam Tilt	**0.00 deg**
Per Polarization		Frequency	**93.90 MHz**
Calculated / Measured	**Calculated**