

**EXHIBIT #1**  
**ENGINEERING STATEMENT**

University of Kentucky  
Minor Change to  
WUKY  
Channel 217 – 100 kW H & V DA  
Lexington, Kentucky

August 2005

CH 217C1

100 kW H & V DA

This engineering statement supports the application of the University of Kentucky to make a minor change to NCE FM station WUKY, Lexington, Kentucky to move the transmitter, increase power, modify the directional antenna, decrease antenna height above average terrain and downgrade to Class C1. There are no further changes at this time.

Page #3 contains information about the proposed directional antenna.

A 60 dBu change area map is included as Page #4. A total of 36 evenly spaced radials were used to determine the antenna height above average terrain. The N.G.D.C. 30 arc second database was employed to determine the elevations along the radials that were averaged using the required four-point interpolation method. The resulting averaged radial antenna heights were employed using the Commission's own TVFMINT algorithm to project the distances to signal contours. A tabular listing of the distance to the one mV/m contour of the modified facility can be found on page #5 of this exhibit.

Exhibit #13 defines the location of the main studio.

Exhibit #15 is an Allocation Report. The first page is a computer channel study of all stations having a frequency and distance relationship. The exhibit gives current operating powers, HAAT's bearings and distances. (All distances were computed according to the method described under Section 73.208 of the Commission's Rules.) The second page is a narrative of the methods and conventions used in the report. There are no pertinent I.F. relationships and the station is outside the required distance to Canada, Mexico, AM stations, FCC monitoring stations, Table Mountain and the West Virginia Quiet Zone. Pages 3-9 are a map and FMOVER tables of the proposed facility's relationship with first-adjacent station WVCT. The map and FMOVER table contained in pages 10-16 describe the relationship between the instant proposal and third-adjacent station WPTJ.

There are no channel 6 television stations within the 174 km cutoff distance for an FM station on Channel 217.

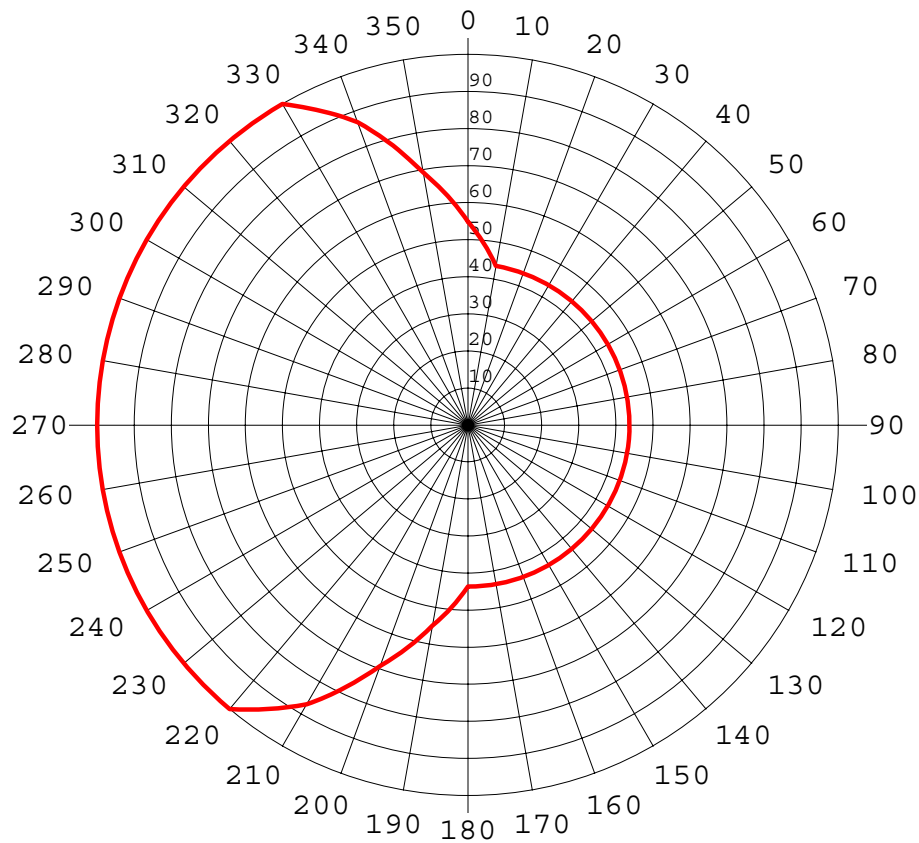
Exhibit #22 is an R.F. emissions compliance statement.

Page #6 of Exhibit #1 is a statement of the qualifications of the preparer.

Kate Michler

# WUKY Proposed Pattern

Ex #1, Pg #3



Azi	Rel	dBk	kW	dB	Azi	Rel	dBk	kW	dB
0	0.549	14.79	30.1	-5.21	180	0.436	12.79	19.0	-7.21
10	0.436	12.79	19.0	-7.21	190	0.549	14.79	30.1	-5.21
20	0.436	12.79	19.0	-7.21	200	0.691	16.79	47.7	-3.21
30	0.436	12.79	19.0	-7.21	210	0.870	18.79	75.6	-1.21
40	0.436	12.79	19.0	-7.21	220	1.000	20.00	100.0	0.00
50	0.436	12.79	19.0	-7.21	230	1.000	20.00	100.0	0.00
60	0.436	12.79	19.0	-7.21	240	1.000	20.00	100.0	0.00
70	0.436	12.79	19.0	-7.21	250	1.000	20.00	100.0	0.00
80	0.436	12.79	19.0	-7.21	260	1.000	20.00	100.0	0.00
90	0.436	12.79	19.0	-7.21	270	1.000	20.00	100.0	0.00
100	0.436	12.79	19.0	-7.21	280	1.000	20.00	100.0	0.00
110	0.436	12.79	19.0	-7.21	290	1.000	20.00	100.0	0.00
120	0.436	12.79	19.0	-7.21	300	1.000	20.00	100.0	0.00
130	0.436	12.79	19.0	-7.21	310	1.000	20.00	100.0	0.00
140	0.436	12.79	19.0	-7.21	320	1.000	20.00	100.0	0.00
150	0.436	12.79	19.0	-7.21	330	1.000	20.00	100.0	0.00
160	0.436	12.79	19.0	-7.21	340	0.870	18.79	75.6	-1.21
170	0.436	12.79	19.0	-7.21	350	0.691	16.79	47.7	-3.21

Rotation Angle = 0

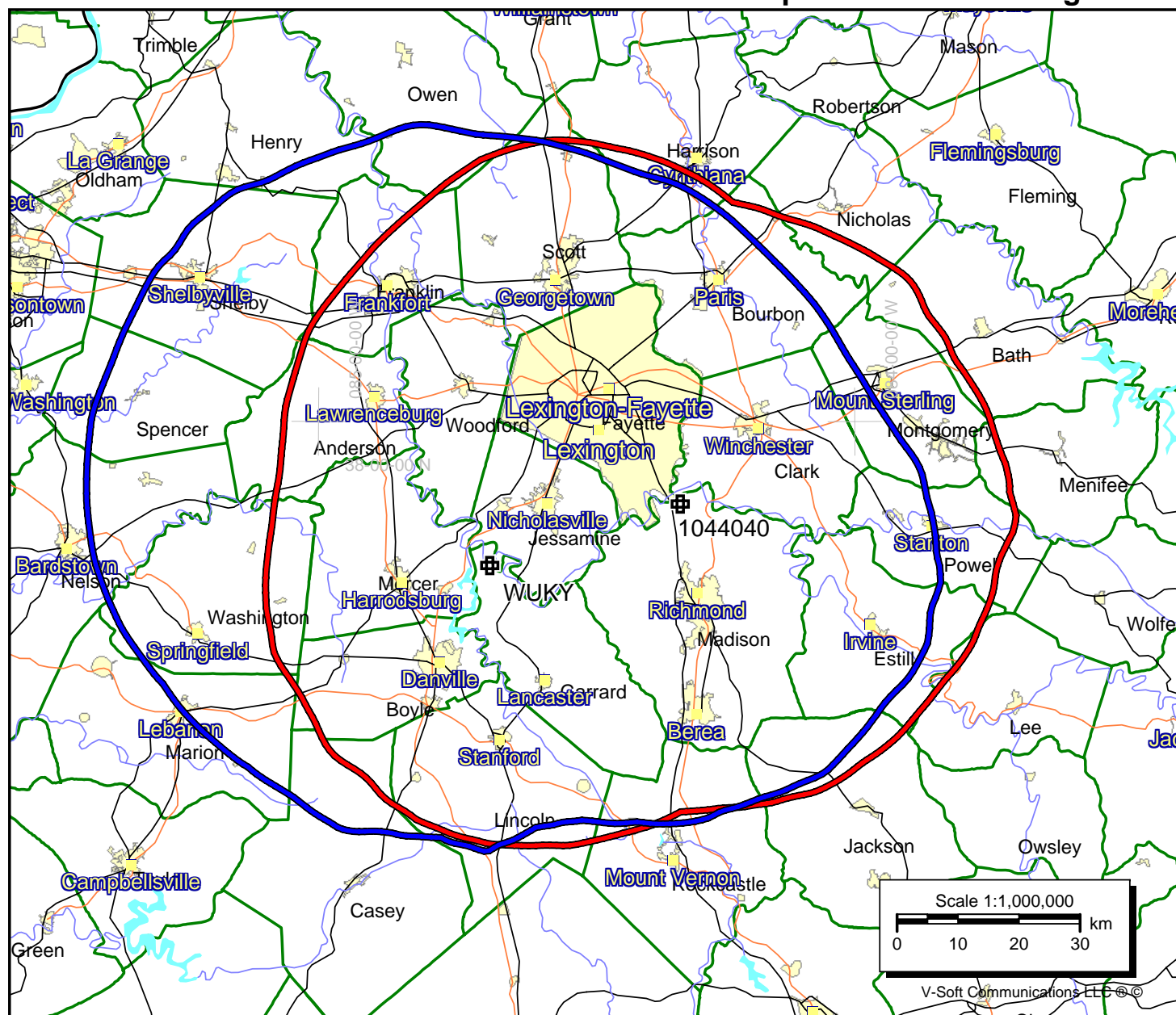
## WUKY Proposed 60 dBu Change Area

1044040  
 Class C1  
 Latitude: 37-52-45 N  
 Longitude: 084-19-33 W  
 ERP: 100.00 kW  
 Frequency: 91.3 MHz  
 AMSL Height: 500.4 m  
 HAAT: 237.4 m  
 Horiz. Pattern: Directional  
  
 Pop = 691,493

**WUKY**  
 BLED19891211KA  
 Latitude: 37-47-18 N  
 Longitude: 084-40-49 W  
 ERP: 95.00 kW  
 Frequency: 91.3 MHz  
 AMSL Height: 562.0 m  
 HAAT: 306.0 m  
 Horiz. Pattern: Directional

August 25, 2005

**V** Doug Vernier  
 721 West 1st Street, Suite A  
 Cedar Falls, Iowa 50613  
 Telecommunications Consultants



N. Lat. = 37 52 45 W. Lng. = 84 19 33  
 HAAT and Distance to Contour - FCC Method - 30 Arc. Sec.  
 WUKY - Move to Tower #1044040  
 Azi. AV EL HAAT ERP kW Field 60-F5

000	274.2	226.2	30.1162	0.549	54.94
010	281.5	218.9	19.0000	0.436	50.16
020	284.6	215.8	19.0000	0.436	49.91
030	275.0	225.4	19.0000	0.436	50.68
040	260.2	240.2	19.0000	0.436	51.79
050	261.7	238.7	19.0000	0.436	51.69
060	269.9	230.5	19.0000	0.436	51.07
070	256.5	243.9	19.0000	0.436	52.06
080	243.0	257.4	19.0000	0.436	53.03
090	222.4	278.0	19.0000	0.436	54.51
100	242.0	258.4	19.0000	0.436	53.11
110	242.9	257.5	19.0000	0.436	53.05
120	248.9	251.5	19.0000	0.436	52.61
130	258.9	241.5	19.0000	0.436	51.89
140	256.0	244.4	19.0000	0.436	52.10
150	255.2	245.2	19.0000	0.436	52.16
160	267.0	233.4	19.0000	0.436	51.29
170	277.1	223.3	19.0000	0.436	50.51
180	278.0	222.4	19.0000	0.436	50.44
190	276.4	224.0	30.1162	0.549	54.76
200	270.8	229.6	47.7309	0.691	59.47
210	267.8	232.6	75.6484	0.870	64.08
220	260.7	239.7	100.0000	1.000	67.39
230	247.8	252.6	100.0000	1.000	68.45
240	233.8	266.6	100.0000	1.000	69.63
250	219.6	280.8	100.0000	1.000	70.82
260	242.1	258.3	100.0000	1.000	68.93
270	271.3	229.1	100.0000	1.000	66.49
280	276.7	223.7	100.0000	1.000	66.00
290	268.5	231.9	100.0000	1.000	66.72
300	270.7	229.7	100.0000	1.000	66.53
310	282.5	217.9	100.0000	1.000	65.48
320	288.7	211.7	100.0000	1.000	64.90
330	285.7	214.7	100.0000	1.000	65.18
340	275.6	224.8	75.6484	0.870	63.41
350	274.5	225.9	47.7309	0.691	59.16

Ave El = 263.00 M HAAT= 237.40 M AMSL= 500.4

**Declaration:**

I, Katherine A. Michler, have received a Bachelor of Science degree from the University of Northern Iowa, and;

That, I declare that I have received training as a technical consultant as a member of the staff of Doug Vernier Telecommunications Consultants, and;

That, I have apprenticed under Douglas Vernier for over seven years, and;

That, he has been active in broadcast consulting for over 30 years, and;

That, his qualifications are a matter of record with the Federal Communications Commission, and;

That, I am an Associate Member (#20792) of the Society of Broadcast Engineers, Indianapolis, Indiana, and;

That, the consulting firm of Doug Vernier Telecommunications Consultants has been retained by the University of Kentucky, Lexington, Kentucky;

That, I have personally prepared these engineering showings, the technical information contained in same and the facts stated within are true to my knowledge, and;

That, under penalty of perjury, I declare that the foregoing is correct.

 \_\_\_\_\_ Katherine A. Michler

Executed on August 26, 2005