

**AM BROADCAST STATION WKHB  
BROADCAST COMMUNICATIONS, INC.  
620 KHZ, IRWIN, PENNSYLVANIA**

**Licensed: 0.05 kW-N/5.5 kW-D ND-2-U  
Proposed: 0.25 kW-N/5.5 kW-D DA-N-U**

**18 JULY 2001**

**FIGURE 8**

**NIGHTTIME ALLOCATION STUDY SUMMARY**

**1. GENERAL:**

WKHB is currently licensed to operate with a secondary nighttime power of 50 watts, employing a nondirectional antenna system. WKHB now proposes to operate with a nighttime power of 250 watts, employing a new four-tower directional antenna system to be built at its licensed antenna site.

**2. NIGHTTIME LIMIT TO WKHB:**

The 50% RSS night limit for WKHB (to be used for coverage purposes) was determined to be 13.0 mV/m. The limit comes from: WJRZ - 11.0 mV/m and WWNR - 7.01 mV/m.

**3. ALLOWABLE RADIATIONS TO OTHER STATIONS:**

Pages 2 through 4 of this figure furnish a tabulation of points of protection to other critical co-channel and first adjacent channel stations. Detailed determinations of these and other affected stations' 50% and 25% RSS night limit values are provided in Table 4. Determination of the night limit contour locations for the "clipping studies" are given by Figures 9 through 13 and Table 2.

## FIGURE 8

### NIGHTTIME ALLOCATION STUDY SUMMARY

Point	Coordinates	Distance (km)	Azimuth (deg. T.)	Crit. Angle Bracket (deg.)	Max. Rad. (mV/m)	SW Field Factor (mV/m)	Limit From WKHB (mV/m)
<b>To WHEN 6.40 mV/m 50% RSS N.L. Contour</b>							
A	43-21-15 N; 76-21-00 W	439.5	38.1	17.1 - 27.5	71.9	0.125	1.80
						Permissible Limit =	1.81
B	43-09-30 N; 76-20-45 W	423.4	40.0	17.8 - 28.5	59.5	0.132	1.57
						Permissible Limit =	1.85
C	43-01-00 N; 76-17-00 W	415.4	42.0	18.2 - 29.0	47.3	0.136	1.28
						Permissible Limit =	1.87
D	42-51-15 N; 76-14-45 W	404.8	44.1	18.7 - 29.6	34.7	0.140	0.97
						Permissible Limit =	1.91
E	42-49-30 N; 76-02-00 W	415.4	46.1	18.2 - 29.0	24.3	0.136	0.66
						Permissible Limit =	1.88
F	43-01-15 N; 76-00-30 W	431.6	44.1	17.5 - 28.0	35.6	0.129	0.92
						Permissible Limit =	1.80
G	43-10-15 N; 76-04-30 W	439.4	42.0	17.1 - 27.5	48.1	0.126	1.21
						Permissible Limit =	1.78
H	43-21-00 N; 76-06-30 W	452.1	40.0	16.6 - 26.8	60.8	0.121	1.47
						Permissible Limit =	1.76
<b>To WMAL 2.75 mV/m 50% RSS N.L. Contour</b>							
A	39-22-30 N; 77-03-00 W	248.1	113.3	29.6 - 43.4	189.4	0.246	0.93
						Permissible Limit =	0.94
B	39-16-15 N; 76-18-15 W	234.0	118.2	31.1 - 45.1	178.4	0.259	0.92
						Permissible Limit =	0.93
C	39-05-00 N; 77-22-00 W	240.5	123.1	30.4 - 44.3	175.1	0.253	0.89
						Permissible Limit =	0.94
D	38-56-30 N; 77-28-00 W	243.0	127.3	30.1 - 44.0	169.4	0.251	0.85
						Permissible Limit =	0.96
E	38-43-45 N; 77-29-45 W	256.6	131.8	28.7 - 42.4	166.1	0.239	0.80
						Permissible Limit =	0.98
F	38-37-15 N; 77-06-30 W	289.7	129.0	25.8 - 38.9	183.2	0.214	0.78
						Permissible Limit =	1.01
G	38-38-00 N; 76-37-15 W	322.1	123.9	23.3 - 35.8	203.9	0.191	0.78
						Permissible Limit =	0.94
H	39-03-00 N; 76-47-00 W	285.2	117.9	26.1 - 39.3	201.8	0.216	0.87
						Permissible Limit =	0.94

## FIGURE 8

### NIGHTTIME ALLOCATION STUDY SUMMARY

Point	Coordinates	Distance (km)	Azimuth (deg. T.)	Critical Angle Bracket (deg.)	Max. Rad. (mV/m)	SW Field Factor (mV/m)	Limit From WKHB (mV/m)
<b>To WRJZ 4.84 mV/m 50% RSS N.L. Contour</b>							
A	35-49-48 N; 83-29-49 W	596.7	215.0	12.2 - 20.5	92.9	0.0902	1.67
						Permissible Limit =	1.68
B	36-10-20 N; 83-26-42 W	562.4	216.7	13.1 - 21.7	89.4	0.0977	1.75
						Permissible Limit =	1.83
C	36-19-08 N; 83-41-20 W	561.9	219.5	13.1 - 21.8	84.9	0.0977	1.66
						Permissible Limit =	1.80
D	36-10-55 N; 84-10-40 W	600.9	222.0	12.1 - 20.3	81.9	0.0890	1.46
						Permissible Limit =	1.66
E	35-41-07 N; 84-00-44 W	636.0	217.8	11.3 - 19.2	88.4	0.0824	1.46
						Permissible Limit =	1.68
<b>To WSNR 50% RSS N.L. Contours (20.0 mV/m LIC; 19.8 mV/m CP; 20.2 mV/m APP)</b>							
A	40-59-12 N; 74-22-26 W	456.0	78.5	16.5 - 26.6	178.4	0.123	4.39
						Permissible Limit =	5.25
B	40-50-26 N; 74-22-31 W	453.9	80.5	16.6 - 26.7	187.5	0.124	4.65
						Permissible Limit =	5.18
C	40-46-14 N; 74-24-39 W	450.2	81.5	16.7 - 26.9	191.4	0.125	4.80
						Permissible Limit =	5.15
D	40-38-09 N; 74-12-39 W	465.9	83.5	16.1 - 26.1	201.6	0.120	4.84
						Permissible Limit =	5.04
E	40-29-03 N; 73-58-09 W	485.8	85.6	15.4 - 25.1	212.0	0.114	4.81
						Permissible Limit =	5.08
F	40-41-20 N; 73-50-17 W	497.7	83.0	15.0 - 24.5	202.6	0.110	4.44
						Permissible Limit =	5.02
G	40-46-09 N; 73-41-14 W	510.9	82.1	14.6 - 23.9	199.7	0.106	4.22
						Permissible Limit =	5.05
H	40-56-40 N; 73-58-39 W	488.4	79.6	15.3 - 25.0	186.6	0.112	4.18
						Permissible Limit =	5.16

**FIGURE 8**  
**NIGHTTIME ALLOCATION STUDY SUMMARY**

Point	Coordinates	Distance (km)	Azimuth (deg. T.)	Critical Angle Bracket (deg.)	Max. Rad. (mV/m)	SW Field Factor (mV/m)	Limit From WKHB (mV/m)
<b>To WTMJ 2.0 mV/m Normally Protected Contour</b>							
A	41-56-00 N; 88-02-30 W	721.9	287.4	9.6 - 16.7	63.3	0.0623	0.788
						Permissible Limit =	0.795
B	42-10-30 N; 87-46-00 W	705.9	289.9	9.9 - 17.1	55.2	0.0642	0.709
						Permissible Limit =	0.758
C	42-30-00 N; 87-48-00 W	718.5	292.6	9.7 - 16.8	47.7	0.0621	0.593
						Permissible Limit =	0.758
D	42-46-45 N; 87-45-30 W	725.1	295.1	9.6 - 16.6	42.8	0.0609	0.521
						Permissible Limit =	0.744
E	43-04-15 N; 87-51-45 W	744.5	297.2	9.3 - 16.1	41.1	.0580	0.476
						Permissible Limit =	0.754
F	43-23-00 N; 87-51-30 W	757.8	299.7	9.0 - 15.8	42.8	0.0560	0.478
						Permissible Limit =	0.709
G	43-41-00 N; 87-42-00 W	760.7	302.4	9.0 - 15.7	49.1	0.0553	0.542
						Permissible Limit =	0.757
H	43-57-30 N; 87-41-45 W	774.7	304.4	8.8 - 15.4	56.3	0.0533	0.600
						Permissible Limit =	0.732
I	44-10-30 N; 87-30-45 W	774.2	306.5	8.8 - 15.4	65.3	0.0531	0.693
						Permissible Limit =	0.784
J	44-30-00 N; 87-29-00 W	791.6	308.8	8.5 - 15.0	76.6	0.0508	0.778
						Permissible Limit =	0.826
K	44-43-00 N; 87-33-00 W	809.5	310.0	8.3 - 14.6	82.9	0.0486	0.807
						Permissible Limit =	0.811
L	44-46-30 N; 88-10-00 W	853.5	308.5	7.6 - 13.7	75.5	0.0443	0.670
						Permissible Limit =	0.743
M	44-18-00 N; 88-33-00 W	852.8	304.4	7.7 - 13.7	56.7	0.0449	0.510
						Permissible Limit =	0.708
N	43-48-00 N; 88-48-30 W	846.6	300.4	7.7 - 13.8	44.4	0.0461	0.409
						Permissible Limit =	0.698
O	43-14-45 N; 88-47-00 W	821.2	296.6	8.1 - 14.4	41.8	0.0491	0.411
						Permissible Limit =	0.700
P	42-45-30 N; 89-07-00 W	829.9	292.4	8.0 - 14.2	48.7	0.0487	0.482
						Permissible Limit =	0.789
Q	42-29-00 N; 88-19-45 W	759.5	291.5	9.0 - 15.7	51.1	0.0568	0.580
						Permissible Limit =	0.743