

MINOR CHANGE APPLICATION
HARRISON RADIO STATIONS, INC.
KNWA(AM) RADIO STATION
has: 1600 kHz - 0.05/5.0 kW - ND
req: 1600 kHz - 0.05/1.0 kW - ND
BELLEFONTE, ARKANSAS
December 2011

EXHIBIT #3A

Night Radiation Limit Report

KNWA 1600 kHz Bellefonte, AR, US Hours: N
 Lat: 36-14-49 N Lng: 093-05-06 W
 Power: 0.050 kW Theo RMS: 305 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0

Radiation limits above 150.0 mV/m@1km are not shown.

	Ct	St	City	Azimuth (Deg)	Min Theta (Deg)	Max Theta (Deg)	Limit (mV/m @ 1km)
KGym	US	IA	CEDAR RAPIDS	11.4	11.0	18.7	66.4
KATZ	US	MO	ST LOUIS	44.3	20.2	31.7	62.2
NEW	US	AL	HUNTSVILLE	104.0	12.0	20.2	104.2
WHIY	US	AL	HUNTSVILLE	104.0	12.0	20.2	104.2
WXVI	US	AL	MONTGOMERY	122.5	9.1	15.8	107.7
KRVA	US	TX	COCKRELL HILL	221.5	14.5	23.8	119.5
XEB/O (100)	MX	DF	SAN LORENZO TEZ	221.8	3.7	3.7	247.9
XEB/O (75)	MX	DF	SAN LORENZO TEZ	223.3	8.8	8.8	57.8

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EXHIBIT #3B

Night Allocation Protection Report

KNWA 1600 kHz Bellefonte, AR, US Hours: N
 Lat: 36-14-49 N Lng: 093-05-06 W
 Power: 0.050 kW Theo RMS: 305 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0

Note: Clearance Greater than 80 mV/m are not shown

Call Letters	Ct St City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
KATZ	US MO ST LOUIS	44.26	20.22	31.75	167.84	2.089	62.24	62.24	0.00
50% = 4.591, 25% = 5.642; HCPN1-A=2.95 KGYM=2.76 WXVI=2.18 KNWA=2.09 WHIY=1.51 KLEB=1.47 WRPN=1.39									
KGYM	US IA CEDAR RAPIDS	11.39	11.01	18.71	79.15	1.051	66.38	66.38	0.00
50% = 3.17, 25% = 3.931; HCPN1-A=2.35 KLGA=1.52 KATZ=1.49 WRPN=1.43 KPNP=1.08 KGST=1.05 KNWA=1.05									
NEW	US AL HUNTSVILLE	103.95	11.99	20.15	92.55	1.929	104.22	66.04	38.18
50% = 7.541, 25% = 7.784; WXVI=6.44 HCPN1-A=3.93 KGYM=1.93									
WHIY	US AL HUNTSVILLE	103.95	11.99	20.15	92.55	1.929	104.22	66.04	38.18
50% = 7.541, 25% = 7.784; WXVI=6.44 HCPN1-A=3.93 KGYM=1.93									
WXVI	US AL MONTGOMERY	122.51	9.07	15.82	68.33	1.472	107.73	66.95	40.78
50% = 4.602, 25% = 5.889; HCPN1-A=4.60 WKWF=2.11 WHIY=1.95 KLEB=1.74 XE/A=1.48									
KRVA	US TX COCKRELL HILL	221.48	14.54	23.85	117.26	2.803	119.53	65.07	54.47
50% = 10.559, 25% = 11.213; KATZ=7.96 KOKE=6.94 HCPN1-A=3.77									

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EXHIBIT #3C

Nighttime RSS Calculations

KNWA 1600 kHz Bellefonte, AR, US Hours: N
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 Power: 0.050 kW Theo RMS: 305 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0

Standard: FCC Rules (1992 Skywave Propagation Model) [10%]

Contributors:

Call	Freq (kHz)	City	St	Ct	Dist (km)	Azi (deg)	Theta Min (deg)	Theta Max (deg)	Max V-Rad (mV/m)	SW Mult (uV/m)	Limit (mV/m)	(%)	RSS Limit (mV/m)
KATZ	1600	ST LOUIS	MO	US	373.7	226.1	20.2	31.7	816.59	167.84	27.412	100.0	27.412 *
WXVI	1600	MONTGOMERY	AL	US	756.5	306.3	9.1	15.8	450.83	68.33	6.161	22.5	28.096
HCPN1-A	1600	QUITO 4	EC		4321.9	341.1	0.0	0.0	3094.60	5.31	3.285	11.7	28.287

* - Nighttime Interference Free Contour