

MINOR CHANGE APPLICATION
CUMULUS LICENSING, LLC
WXQW/ AM RADIO STATION
660 kHz - .019/10.0 kW - NDU
FAIRHOPE, ALABAMA
December 2016

EXHIBIT #3A

Night Allocation Protection Report

Night Allocation Protection Report

WXQW 660 kHz FAIRHOPE, AL, US Hours: N Proposed
 North Latitude: 30° 35' 5" West Longitude: 87° 52' 58"
 Power: 0.019 kW Theo RMS: 290.27 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	-999.0	0	1	51.2	15.0	0.0	0.0

Margins Greater Than 100 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)
WFAN (195)	US	NY	NEW YORK	62.94	3.77	8.02	31.57	0.776	122.85s	39.91	82.95
WFAN (200)	US	NY	NEW YORK	64.56	4.55	9.16	36.40	0.668	91.73s	39.86	51.88
WFAN (205)	US	NY	NEW YORK	64.24	5.28	10.22	41.09	0.615	74.80s	39.81	34.99
WFAN (210)	US	NY	NEW YORK	65.89	6.64	12.22	50.69	0.514	50.66s	39.70	10.96
WFAN (215)	US	NY	NEW YORK	62.52	7.36	13.28	55.96	0.500	44.67s	39.61	5.06
WFAN (220)	US	NY	NEW YORK	57.73	7.81	13.96	59.35	0.500	42.13s	39.57	2.56
WFAN (225)	US	NY	NEW YORK	52.46	8.11	14.39	61.49	0.500	40.66s	39.54	1.12
WFAN (230)	US	NY	NEW YORK	46.96	8.20	14.53	62.04	0.500	40.29s	39.52	0.77
WFAN (235)	US	NY	NEW YORK	41.53	8.08	14.35	60.92	0.500	41.04s	39.54	1.50
WFAN (240)	US	NY	NEW YORK	36.44	7.76	13.88	58.27	0.500	42.90s	39.57	3.33
WFAN (245)	US	NY	NEW YORK	31.89	7.31	13.21	54.60	0.500	45.79s	39.62	6.16
WFAN (250)	US	NY	NEW YORK	28.02	6.76	12.40	50.29	0.500	49.71s	39.68	10.04
WFAN (255)	US	NY	NEW YORK	24.82	6.17	11.53	45.81	0.500	54.57s	39.73	14.84
WFAN (260)	US	NY	NEW YORK	22.30	5.56	10.63	41.41	0.500	60.37s	39.78	20.58
WFAN (265)	US	NY	NEW YORK	20.38	4.96	9.76	37.29	0.500	67.04s	39.83	27.21
WFAN (270)	US	NY	NEW YORK	18.97	4.39	8.93	33.54	0.500	74.54s	39.87	34.67
WFAN (275)	US	NY	NEW YORK	18.01	3.85	8.15	30.18	0.500	82.83s	39.90	42.93
WFAN (280)	US	NY	NEW YORK	17.41	3.35	7.43	27.21	0.500	91.88s	39.93	51.95
WFAN (285)	US	NY	NEW YORK	22.43	2.68	6.47	23.65	0.656	138.80s	39.96	98.84
WFAN (290)	US	NY	NEW YORK	17.11	2.44	6.14	22.30	0.500	112.11s	39.97	72.14
WFAN (295)	US	NY	NEW YORK	17.30	2.04	5.58	20.29	0.500	123.20s	39.98	83.21

KSKY US TX BALCH SPRINGS 289.96 7.08 12.87 54.48 1.520 139.51 39.65 99.86
 50% = 5.019, 25% = 6.08; WFAN=5.02 WSM=2.49 XEEY/A=1.76 XEDTL/A=1.58

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EXHIBIT #3B

Night Radiation Limit Report

Night Radiation Limit Report for WXQW

Frequency: 660 kHz

Latitude: 30-35-50 N Longitude: 087-52-58 W

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)
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WFAN (280)	US	NY	NEW YORK	17.4	3.3	7.4	91.9
WFAN (275)	US	NY	NEW YORK	18.0	3.9	8.1	82.8
WFAN (270)	US	NY	NEW YORK	19.0	4.4	8.9	74.5
WFAN (265)	US	NY	NEW YORK	20.4	5.0	9.8	67.0
WFAN (260)	US	NY	NEW YORK	22.3	5.6	10.6	60.4
WFAN (285)	US	NY	NEW YORK	22.4	2.7	6.5	138.8
WFAN (255)	US	NY	NEW YORK	24.8	6.2	11.5	54.6
WFAN (250)	US	NY	NEW YORK	28.0	6.8	12.4	49.7
WFAN (245)	US	NY	NEW YORK	31.9	7.3	13.2	45.8
WFAN (240)	US	NY	NEW YORK	36.4	7.8	13.9	42.9
WFAN (235)	US	NY	NEW YORK	41.5	8.1	14.4	41.0
WFAN (230)	US	NY	NEW YORK	47.0	8.2	14.5	40.3
WFAN (225)	US	NY	NEW YORK	52.5	8.1	14.4	40.7
WFAN (220)	US	NY	NEW YORK	57.7	7.8	14.0	42.1
WFAN (215)	US	NY	NEW YORK	62.5	7.4	13.3	44.7
WFAN (205)	US	NY	NEW YORK	64.2	5.3	10.2	74.8
WFAN (200)	US	NY	NEW YORK	64.6	4.6	9.2	91.7
WFAN (210)	US	NY	NEW YORK	65.9	6.6	12.2	50.7
KSKY	US	TX	BALCH SPRINGS	290.0	7.1	12.9	139.5

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EXHIBIT #3C

Night RSS Calculations

WXQW 660 kHz FAIRHOPE, AL, US Hours: N Proposed
 North Latitude: 30° 35' 50" West Longitude: 87° 52' 58"
 Power: 0.019 kW Theo RMS: 282.50 mV/m @ 1km @ 1kW

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

Contributors:

Call	Freq (kHz)	City	St	Ct	Dist (km)	Azi (deg)	Theta		Max V-Rad (mV/m)	SW Mult (uV/m)	Limit (mV/m)	Limit (%)	RSS Limit (mV/m)
							Min	Max					
WFAN	0660	NEW YORK	NY	US	1704.9	232.4	1.0	4.1	2684.61	16.74	8.990	100.0	8.990
WSM	0650	NASHVILLE	TN	US	608.9	189.9	11.9	20.1	2535.72	93.67	4.751	52.8	10.168 *
						50 %							
						25 %							
KSKY	0660	BALCH SPRINGS	TX	US	893.1	105.2	7.1	12.9	176.80	54.48	1.926	18.9	10.349

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 WXQW 660 kHz FAIRHOPE, AL, US Hours: N Present
 North Latitude: 30° 35' 51" West Longitude: 87° 52' 57"
 Power: 0.85 kW - Custom Q Value Used: 10.75
 Theo RMS: 282.50 mV/m @ 1km @ 0.85 kW

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

Contributors:

Call	Freq (kHz)	City	St	Ct	Dist (km)	Azi (deg)	Theta		Max V-Rad (mV/m)	SW Mult (uV/m)	Limit (mV/m)	Limit (%)	RSS Limit (mV/m)
							Min	Max					
WFAN	0660	NEW YORK	NY	US	1704.9	232.4	1.0	4.1	2684.61	16.74	8.990	100.0	8.990
WSM	0650	NASHVILLE	TN	US	608.8	189.9	11.9	20.1	2535.72	93.68	4.751	52.8	10.168 *
						50 %							
						25 %							
KSKY	0660	BALCH SPRINGS	TX	US	898.1	105.2	7.1	12.9	176.78	54.48	1.926	18.9	10.349

* - Nighttime Interference Free Contour