

MINOR CHANGE APPLICATION
CUMULUS LICENSING LLC
WTOD AM RADIO STATION
has: 1560 kHz - 5.0 kW - DAD
req: 1560 kHz - 0.002/4.3 kW - DA2
TOLEDO, OHIO
February 2008

EXHIBIT #4A

Critical Hours Radiation Report

Call: WTOD Freq: 1560 kHz TOLEDO, OH, US Proposed
Lat: 41-37-34 N Lng: 083-38-03 W
Power: 4.3 kW Theo RMS: 599.03 mV/m @ 1Im @ 4.3 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	92.5	0	0	0.0	0.0	0.0	0.0
2	0.600	15.0	180.0	90.0	92.5	0	0	0.0	0.0	0.0	0.0

Interpolation factors for 1560 kHz:

K(500) = 0.000
K(1000) = 0.067
K(1600) = 0.933

Call: KNZR Freq: 1560 kHz BAKERSFIELD, CA, US
Lat: 35-18-30 N Lng: 119-02-46 W
Power: 25.0 kW Theo RMS: 419.20 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	205.0	0	0	0.0	0.0	0.0	0.0

Permissible radiation calculated using FCC 73.190 curves.

Class A Azimuth (deg)	Reference Azimuth (deg)	Distance to 0.1 mV (km) / (mi)	Max Vert Angle (deg)	Max Rad Below Ang (mV/m@1km)	Permiss Radiation (mV/m@1km)	Margin (mV/m@1km)
163.25	265.00	3176.6 / 1973.9	0.0	284.36	2817.8	2533.5
123.93	266.00	3055.4 / 1898.5	0.0	283.40	2608.9	2325.5
99.77	267.00	3003.9 / 1866.5	0.0	282.66	2503.8	2221.2
82.05	268.00	2990.2 / 1858.0	0.0	282.14	2472.6	2190.4
63.98	269.00	2988.2 / 1856.8	0.0	281.83	2464.0	2182.2
45.43	270.00	2997.3 / 1862.4	0.0	281.73	2477.5	2195.7
20.18	271.00	3043.0 / 1890.8	0.0	281.83	2571.7	2289.9
358.50	272.00	3083.7 / 1916.1	0.0	282.14	2648.4	2366.3

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EXHIBIT #4B1

Critical Hours Radiation Report / WQEW

Call: WTOD Freq: 1560 kHz TOLEDO, OH, US Proposed
 Lat: 41-37-34 N Lng: 083-38-03 W
 Power: 4.3 kW Theo RMS: 599.03 mV/m @ 1km @ 4.3 kW

#	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	92.5	0	0	0.0	0.0	0.0	0.0
2	0.600	15.0	180.0	90.0	92.5	0	0	0.0	0.0	0.0	0.0

Interpolation factors for 1560 kHz:

K(500) = 0.000
 K(1000) = 0.067
 K(1600) = 0.933

 Call: WQEW Freq: 1560 kHz NEW YORK, NY, US
 Lat: 40-43-00 N Lng: 073-55-04 W
 Power: 50.0 kW Theo RMS: 2655.42 mV/m @ 1km @ 50.0 kW
 # of Augmentations: 1

#	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	171.0	0	0	0.0	0.0	0.0	0.0
2	0.522	62.6	125.0	180.0	171.0	0	0	0.0	0.0	0.0	0.0

Permissible radiation calculated using FCC 73.190 curves.

Class A Azimuth (deg)	Reference Azimuth (deg)	Distance to 0.1 mV (km) / (mi)	Max Vert Angle (deg)	Max Rad Below Ang (mV/m@1km)	Permiss Radiation (mV/m@1km)	Margin (mV/m@1km)
345.14	82.00	764.0 /	474.7	15.6	275.42	228.0
333.75	83.00	732.4 /	455.1	16.4	276.84	222.2
328.32	84.00	721.2 /	448.1	16.7	278.10	220.1
321.58	85.00	706.3 /	438.9	17.1	279.18	217.2
315.56	86.00	694.2 /	431.3	17.4	280.09	214.9
310.25	87.00	684.9 /	425.6	17.7	280.80	213.0
305.41	88.00	678.0 /	421.3	17.9	281.31	211.6
300.88	89.00	673.0 /	418.2	18.0	281.62	210.5
296.55	90.00	669.6 /	416.1	18.1	281.73	209.8
292.33	91.00	667.7 /	414.9	18.2	281.62	209.6
288.06	92.00	665.9 /	413.8	18.2	281.31	209.4
283.76	93.00	663.1 /	412.0	18.3	280.80	209.0
279.60	94.00	659.4 /	409.7	18.4	280.09	208.5
275.66	95.00	656.1 /	407.7	18.5	279.18	208.0
271.88	96.00	654.4 /	406.6	18.6	278.10	207.9
268.07	97.00	655.1 /	407.1	18.6	276.84	208.2
264.01	98.00	659.1 /	409.5	18.4	275.42	209.1
259.33	99.00	667.2 /	414.6	18.2	273.85	210.7
253.95	100.00	678.1 /	421.3	17.9	272.16	212.8
246.67	101.00	696.1 /	432.5	17.4	270.35	216.3
228.34	102.00	745.9 /	463.5	16.1	268.47	225.5
192.40	103.00	826.7 /	513.7	14.3	266.52	240.8

Clipped at 0.09 mV/m

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EXHIBIT #4B2

Critical Hours Radiation Report / WQEW

Call: WTOD Freq: 1560 kHz TOLEDO, OH, US Present
 Lat: 41-36-59 N Lng: 083-37-22 W
 Power: 5.0 kW Theo RMS: 631.51 mV/m @ 1km @ 5.0 kW
 # of Augmentations: 1

#	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	115.5	0	0	0.0	0.0	0.0	0.0
2	0.580	20.0	180.0	90.0	115.5	0	0	0.0	0.0	0.0	0.0

Interpolation factors for 1560 kHz:

K(500) = 0.000
 K(1000) = 0.067
 K(1600) = 0.933

Call: WQEW Freq: 1560 kHz NEW YORK, NY, US
 Lat: 40-43-00 N Lng: 073-55-04 W
 Power: 50.0 kW Theo RMS: 2655.42 mV/m @ 1km @ 50.0 kW
 # of Augmentations: 1

#	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	171.0	0	0	0.0	0.0	0.0	0.0
2	0.522	62.6	125.0	180.0	171.0	0	0	0.0	0.0	0.0	0.0

Permissible radiation calculated using FCC 73.190 curves.

Class A Azimuth (deg)	Reference Azimuth (deg)	Distance to 0.1 mV (km) / (mi)	Max Vert Angle (deg)	Max Rad Below Ang (mV/m@1km)	Permiss Radiation (mV/m@1km)	Margin (mV/m@1km)
343.39	82.00	758.0 /	471.0	15.8	321.73	227.0 -94.8
333.33	83.00	730.7 /	454.1	16.5	323.42	221.9 -101.5
327.73	84.00	719.0 /	446.8	16.8	324.92	219.7 -105.2
321.03	85.00	704.3 /	437.6	17.1	326.20	216.9 -109.3
315.07	86.00	692.4 /	430.2	17.5	327.26	214.5 -112.7
309.81	87.00	683.4 /	424.6	17.7	328.10	212.7 -115.3
305.00	88.00	676.6 /	420.4	17.9	328.69	211.4 -117.3
300.51	89.00	671.7 /	417.4	18.1	329.06	210.3 -118.8
296.19	90.00	668.4 /	415.3	18.2	329.18	209.5 -119.6
291.98	91.00	666.6 /	414.2	18.2	329.05	209.4 -119.7
287.71	92.00	664.8 /	413.1	18.3	328.67	209.2 -119.5
283.42	93.00	661.8 /	411.2	18.4	328.04	208.8 -119.3
279.28	94.00	658.0 /	408.9	18.5	327.17	208.2 -118.9
275.36	95.00	654.8 /	406.9	18.6	326.06	207.8 -118.3
271.59	96.00	653.2 /	405.9	18.6	324.71	207.7 -117.0
267.77	97.00	654.2 /	406.5	18.6	323.14	208.0 -115.1
263.68	98.00	658.5 /	409.2	18.5	321.36	209.0 -112.4
258.98	99.00	666.7 /	414.3	18.2	319.37	210.6 -108.8
253.53	100.00	678.0 /	421.3	17.9	317.20	212.8 -104.4
246.07	101.00	696.6 /	432.8	17.4	314.86	216.4 -98.5
227.40	102.00	746.8 /	464.0	16.1	312.36	225.7 -86.6
192.23	103.00	826.0 /	513.2	14.3	309.74	240.7 -69.1

Clipped at 0.09 mV/m