

# Radiotechniques

402 Tenth Ave. • PO Box 367 • Haddon Heights, NJ 08035-0367

## AM Allocation Study

### Exhibit 15 Figure 1

April 2002

Coordinates : 41-01-00.0 N 76-27-44.0 W

Frequency : 930

Initial PWR: 0.018 kW

Initial Inv Field: 40.9 mV/M

SITE INFO			CLASS	SLANT   DIST	GEOMAG MIDPT	AZIMUTH TO	GND RAD ---	MIN ELEV ---	MAX ELEV ---	MAX RAD ---	SWAVE FLD SWAVE FLD	LIMITATION ALLOWABLE	RSS LIMIT 50% ---	RSS LIM 25% ---
BEARING	CALL	LIM												
8.4	WKRT	591.995	B	264.5	53.2	8.4	40.9	39.4	53.7	29.5	0.313202	0.185	14.833	14.833
57.4	CFBC	534.515	B	981.9	54.7	57.4	40.9	9.1	9.1	40.2	0.068216	0.549	14.585	15.990
59.1	WGIN	242.706	B	556.8	53.6	59.1	40.9	14.3	23.5	39.2	0.097841	0.767	18.997	18.997
60.8	CJYQ	673.370	B	2020.3	56.4	60.8	40.9	0.9	0.9	40.9	0.010261	0.084	2.764	2.943
77.1	WHJJ	480.858	B	479.8	52.9	77.1	40.9	17.3	27.7	38.5	0.127603	0.098	4.062	4.909
94.8	WPAT	111.569	B	277.5	52.4	94.8	40.9	36.4	50.7	31.0	0.295628	1.830	26.386	26.386
121.6	WCHR	348.247	B	255.7	52.0	121.6	40.9	41.7	55.9	28.2	0.333538	0.188	8.386	9.292
155.6	WIPR	11125.936	B	2704.6	41.3	155.6	40.9	0.0	0.0	40.9	0.008413	0.007	6.092	7.488
158.0	WEKO	1642.485	B	2705.4	41.1	158.0	40.9	0.0	0.0	40.9	0.008451	0.069	10.338	11.104
165.4	HICK	5241.374	C	2467.8	41.7	165.4	40.9	0.0	0.0	40.9	0.005854	0.048	12.273	12.273
182.5	WKGM	675.316	B	479.8	50.4	182.5	40.9	17.3	27.7	38.5	0.134766	0.104	6.427	7.281
185.2	WDLX	422.002	B	644.5	49.6	185.2	40.9	11.8	19.9	39.7	0.086059	0.684	25.127	29.054
193.0	WINZ	12669.576	B	1722.0	44.8	193.0	40.9	1.0	4.1	40.9	0.017957	0.015	18.200	18.200
196.4	WMEL	3414.503	B	1496.3	45.9	196.4	40.9	2.2	5.8	40.9	0.022507	0.018	4.897	6.148
201.5	WLSS	1520.618	B	1624.9	45.5	201.5	40.9	1.5	4.8	40.9	0.019595	0.160	23.837	23.837
203.4	WFXJ	273.807	B	1299.9	47.0	203.4	40.9	3.5	7.6	40.8	0.028114	0.229	5.403	6.158
203.6	WYMB	2150.087	B	903.6	48.7	203.6	40.9	7.3	13.2	40.5	0.050438	0.041	7.679	8.676
205.8	WFMD	68.721	B	280.9	51.6	205.8	40.9	35.7	50.0	31.3	0.293272	1.835	13.319	16.123
207.9		5752.989	B	2769.1	40.9	207.9	40.9	0.0	0.0	40.9	0.004398	0.036	10.121	10.121
212.7	WYFQ	250.940	B	773.9	49.5	212.7	40.9	9.2	16.0	40.2	0.064100	0.515	9.564	12.868
215.4	WMGR	876.019	B	1352.5	47.2	215.4	40.9	3.1	7.1	40.8	0.025956	0.212	16.894	18.191
217.8	WMAC	2822.135	B	1128.0	48.2	217.8	40.9	4.9	9.6	40.7	0.034810	0.028	6.424	7.859
223.5	WAFS	1229.065	B	1079.8	48.7	223.5	40.9	5.3	10.3	40.7	0.037069	0.030	2.814	3.645
223.6	WKYK	1799.346	B	784.6	49.8	223.6	40.9	9.0	15.8	40.2	0.062141	0.050	7.944	8.945
228.9	WYLD	4704.668	B	1748.5	46.7	228.9	40.9	0.8	3.9	40.9	0.016419	0.013	5.304	6.180
230.2	WJBY	628.368	B	1166.7	48.8	230.2	40.9	4.5	9.1	40.7	0.032229	0.263	15.298	16.202
236.1	WSLI	666.404	B	1562.7	47.9	236.1	40.9	1.8	5.3	40.9	0.019392	0.159	7.577	10.338
238.1	KYST	21674.760	B	2118.2	46.4	238.1	40.9	0.0	1.7	40.9	0.011421	0.009	19.804	19.804
238.5	WCPC	4430.826	B	1371.0	48.7	238.5	40.9	3.0	6.9	40.8	0.024051	0.020	7.032	8.525
242.6	WRVC	150.967	B	624.8	51.0	242.6	40.9	12.3	20.6	39.6	0.087597	0.694	7.296	10.579
242.8	WKVA	171.881	B	226.0	52.2	242.8	40.9	53.6	66.0	21.6	0.396364	0.172	4.449	5.450
244.1	KLUP	4189.405	B	2364.9	46.5	244.1	40.9	0.0	0.5	40.9	0.009125	0.075	29.361	30.584
246.0	WKCT	476.629	B	988.5	50.3	246.0	40.9	6.3	11.7	40.6	0.041088	0.333	12.375	15.667
248.4	KARN	4488.986	B	1558.8	49.1	248.4	40.9	1.8	5.3	40.9	0.018550	0.015	5.206	6.661
251.7	WMOK	4804.107	B	1152.5	50.3	251.7	40.9	4.7	9.3	40.7	0.031107	0.025	11.332	11.955
252.8	KWOC	679.940	B	1308.5	50.1	252.8	40.9	3.4	7.5	40.8	0.024798	0.202	10.712	13.489
254.5	KFLB	24479.530	B	2533.5	47.7	254.5	40.9	0.0	0.0	40.9	0.007454	0.006	11.366	14.599
258.4	KAJZ	28601.001	B	2859.1	47.7	258.4	40.9	0.0	0.0	40.9	0.005741	0.005	12.286	13.137

Consulting Engineers

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258.5	WKY	371.695	B		1938.7	49.6	258.5	40.9	0.0	2.7	40.9	0.011785	0.096	3.123	3.504
258.7	WMIX	3654.077	B		1130.2	50.9	258.7	40.9	4.9	9.6	40.7	0.031447	0.026	8.898	9.193
259.5	WMNI	1051.555	B		604.8	51.8	259.5	40.9	12.9	21.4	39.5	0.090528	0.072	5.332	7.616
261.7	KIXZ	5989.116	B		2306.9	49.4	261.7	40.9	0.0	0.7	40.9	0.008270	0.007	3.823	3.962
262.2	WGNU	5734.370	B		1201.5	51.1	262.2	40.9	4.3	8.7	40.7	0.027817	0.023	10.413	12.761
265.8	KSVA	25301.908	B		2712.2	49.4	265.8	40.9	0.0	0.0	40.9	0.005785	0.005	9.938	11.710
268.5	WBAA	2276.636	B		903.8	52.0	268.5	40.9	7.3	13.2	40.5	0.045255	0.037	6.879	8.242
269.3	WTAD	397.216	B		1286.0	51.7	269.3	40.9	3.6	7.8	40.8	0.023776	0.194	6.034	7.555
270.4	KLMR	20900.854	B		2265.3	50.9	270.4	40.9	0.0	1.0	40.9	0.007800	0.006	10.418	13.043
274.6	KYFR	3526.690	B		1590.5	52.1	274.6	40.9	1.7	5.0	40.9	0.015252	0.012	3.207	4.303
275.3	WEOL	71.982	B		506.1	52.5	275.3	40.9	16.2	26.1	38.8	0.118515	0.919	5.507	6.825
277.7	KXTK	3511.102	B		1426.5	52.5	277.7	40.9	2.6	6.4	40.8	0.018536	0.015	4.734	5.207
277.7	WAUR	520.296	B		1022.4	52.6	277.7	40.9	5.9	11.1	40.6	0.035153	0.285	12.793	14.632
278.7	KOGA	2475.460	B		2118.3	52.4	278.7	40.9	0.0	1.7	40.9	0.008087	0.066	15.324	16.015
279.8	KVEL	19742.684	B		2776.0	52.2	279.8	40.9	0.0	0.0	40.9	0.004401	0.004	5.625	6.951
279.8	KVEL	19742.684	B		2776.0	52.2	279.8	40.9	0.0	0.0	40.9	0.004401	0.004	5.625	6.951
284.0	WBCK	386.920	B		764.5	52.9	284.0	40.9	9.4	16.3	40.2	0.058464	0.470	15.079	18.097
285.8	WFAW	1409.023	B		1055.6	53.2	285.8	40.9	5.6	10.6	40.6	0.032033	0.026	2.873	3.611
286.3	KSEI	1178.556	B		2969.6	53.6	286.3	40.9	0.0	0.0	40.9	0.003262	0.027	2.761	3.076
286.6	WOKY	6428.121	B		1002.5	53.3	286.6	40.9	6.1	11.5	40.6	0.035243	0.029	17.110	18.124
290.3	KDHL	6574.743	B		1432.8	53.9	290.3	40.9	2.6	6.4	40.8	0.016751	0.014	7.945	8.811
292.8	KSDN	1553.811	B		1857.1	54.5	292.8	40.9	0.3	3.2	40.9	0.009087	0.074	8.644	11.295
297.9	KWAD	7284.652	B		1623.7	55.0	297.9	40.9	1.5	4.8	40.9	0.011785	0.010	5.222	6.868
299.8	KKIN	1780.902	B		1519.8	55.1	299.8	40.9	2.1	5.6	40.9	0.013527	0.111	17.944	19.272
317.4	WBEN	32.350	B		360.6	53.3	317.4	40.9	24.9	37.8	35.9	0.196953	1.416	2.579	3.590
325.4	CKNS	594.941	B		748.2	54.9	325.4	40.9	13.3	13.3	39.4	0.096440	0.761	22.951	28.506

Note: Detail analysis of allocations with respect to WBEN

Licensed Facility of WHLM (BL19980203AE) towards WBEN

Bearing	Distance	Rad on Gnd	Geomag	Min Elev	Max Elev	Max Rad	Skywave Fld	Limit
316.9°	362.3 km	46.37	53.3°	24.8°	37.7°	40.4	0.195534	1.580

Proposed Facility of WHLM towards WBEN

Bearing	Distance	Rad on Gnd	Geomag	Min Elev	Max Elev	Max Rad	Skywave Fld	Limit
317.4°	360.6 km	40.9	53.3°	24.9°	37.8°	35.9	0.196953	1.418

This proposal reduces the night limit on WBEN by 10% as required by FCC Rules §73.182(q) note 1.