

## **Radiofrequency Radiation Calculation**

**WILN – 50 KW – 106.9 M AGL**

**Panama City, FL**

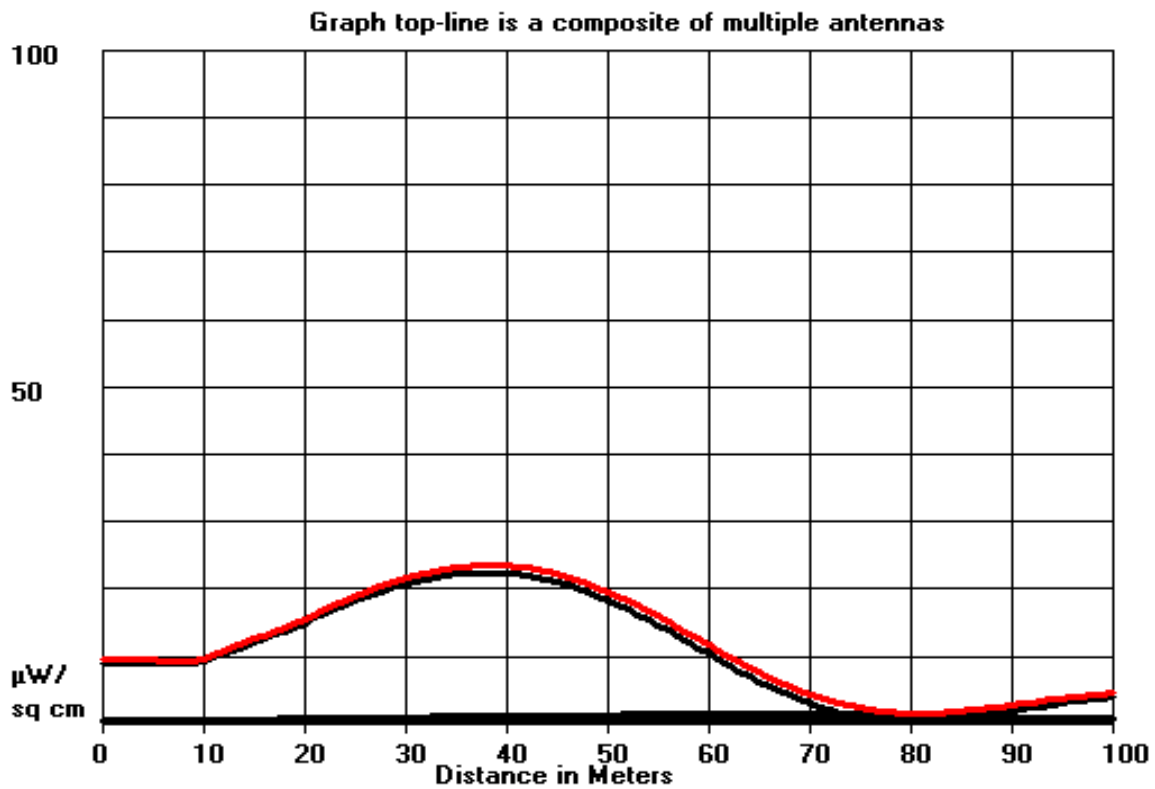
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This radiofrequency Radiation Study is being conducted to determine whether this proposal is in compliance with OET Bulletin Number 65, dated August 1997, regarding human exposure to radiofrequency radiation in the vicinity of broadcast towers. This study considers all nearby contributing stations and utilizes the appropriate formulas contained in the OET bulletin.

The 5-bay ERI SHPX antenna system will be mounted with its center of radiation 106.9 meters above the ground and will operate with an effective radiated power of 50 KW circularly polarized. The ERI SHPX is an EPA Type 3 antenna and qualifies for best case RFR treatment. At two meters, the height of an average person, above the ground at the base of the tower, this proposal will contribute, best case, 8.7703 microwatts/SQ CM or 4.3852% of the allowable ANSI limit.

The commercially available tool RFHazz3 (from V-Soft Communications) was used to calculate and plot total radiation coming from this tower. WILN is the third in a series of stations to propose operation on this tower. The previous two stations are: WYOO, 4.5 KW from 117.6 M AGL and WWLY, 18 KW also from 117.6 M AGL. Attached is a graph and a detailed tabulation of radiation density of these proposed stations. The greatest density occurs at a distance between 37 and 39 meters from the tower base. Here a total of 11.6% of the ANSI limit is consumed by the three stations requested to relocate here. Since this level is far below the maximum allowable contribution, it is thought that this proposal is in compliance with the bulletin listed above. All calculations were made in the uncontrolled mode.

**Bromo Communications, Inc.**



HORZ. DISTANCE FROM RADIATOR(S) vs POWER DENSITY (Microwatt/Square cm)

Dist(Meters)	Total ( $\mu\text{W}/\text{cm}^2$ )	Percent of Max(200)
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0	9.133	4.6
1	9.132	4.6
2	9.129	4.6
3	9.125	4.6
4	9.12	4.6
5	9.112	4.6
6	9.102	4.6
7	9.091	4.5
8	9.077	4.5
9	9.06	4.5
10	9.392	4.7
11	9.938	5.0
12	10.498	5.2
13	11.066	5.5
14	11.641	5.8
15	12.22	6.1
16	12.803	6.4
17	13.386	6.7
18	13.968	7.0
19	14.564	7.3
20	15.248	7.6
21	15.93	8.0
22	16.608	8.3
23	17.277	8.6
24	17.933	9.0
25	18.571	9.3

Dist(Meters)	PD (H)	PD (V)	Total(uW/cm2)	Percent Max.
26		19.189	9.6	
27		19.783	9.9	
28		20.348	10.2	
29		20.862	10.4	
30		21.307	10.7	
31		21.711	10.9	
32		22.072	11.0	
33		22.384	11.2	
34		22.647	11.3	
35		22.857	11.4	
36		23.012	11.5	
37		23.11	11.6	
38		23.147	11.6	
39		23.129	11.6	
40		23.095	11.5	
41		22.994	11.5	
42		22.828	11.4	
43		22.596	11.3	
44		22.301	11.2	
45		21.941	11.0	
46		21.518	10.8	
47		21.034	10.5	
48		20.493	10.2	
49		19.897	9.9	
50		19.26	9.6	
51		18.626	9.3	
52		17.943	9.0	
53		17.217	8.6	
54		16.452	8.2	
55		15.655	7.8	
56		14.835	7.4	
57		13.994	7.0	
58		13.14	6.6	
59		12.277	6.1	
60		11.414	5.7	
61		10.555	5.3	
62		9.716	4.9	
63		8.909	4.5	
64		8.119	4.1	
65		7.353	3.7	
66		6.616	3.3	
67		5.912	3.0	
68		5.248	2.6	
69		4.629	2.3	
70		4.057	2.0	
71		3.533	1.8	
72		3.061	1.5	
73		2.641	1.3	
74		2.276	1.1	
75		1.964	1.0	
76		1.705	0.9	
77		1.502	0.8	

Dist(Meters)	PD (H)	PD (V)	Total(uW/cm2)	Percent Max.
	78	1.351	0.7	
	79	1.251	0.6	
	80	1.199	0.6	
	81	1.191	0.6	
	82	1.223	0.6	
	83	1.289	0.6	
	84	1.387	0.7	
	85	1.513	0.8	
	86	1.665	0.8	
	87	1.837	0.9	
	88	2.025	1.0	
	89	2.226	1.1	
	90	2.434	1.2	
	91	2.647	1.3	
	92	2.859	1.4	
	93	3.069	1.5	
	94	3.272	1.6	
	95	3.466	1.7	
	96	3.649	1.8	
	97	3.817	1.9	
	98	3.968	2.0	
	99	4.102	2.1	
	100	4.216	2.1	