Environmental Protection

There are two main factors that need to be addressed in order to make sure that the environment around a proposed facility is protected.

1) Significant effects to the environment.

EMF's proposed facility will be constructed on an existing tower, therefore it should have no adverse effect on the surrounding environment.

2) Human exposure to excess levels of radiofrequency radiation.

The proposed facility is to be built using a 1-bay circularly polarized antenna.

According to OET 65, "Applicants and licensees should be able to calculate, based on considerations of frequency, power and antenna characteristics the distance from their transmitter where their signal produces an RF field equal to, or greater than, the 5% threshold limit. The applicant or licensee then shares responsibility for compliance in any accessible area or areas within this 5% "contour" where the appropriate limits are found to be exceeded."

As can be seen in Exhibit 24-A, the proposed facility's maximum contribution to RF on the site is 6.936 $\mu W/cm^2$ at a distance of 9 meters from the tower, which is 3.5% of the uncontrolled (public) exposure limit.

Therefore, because the proposed facility will not cause an RF field that is equal to or greater than 5% of the 200 $\mu W/cm^2$ limit for uncontrolled exposure at any point, the proposed facility complies with the requirements of OET 65.

EMF will fully cooperate with other site users to temporarily reduce power or cease broadcasting, as necessary, to protect workers and others having access to the site from excessive levels of RF Radiation.

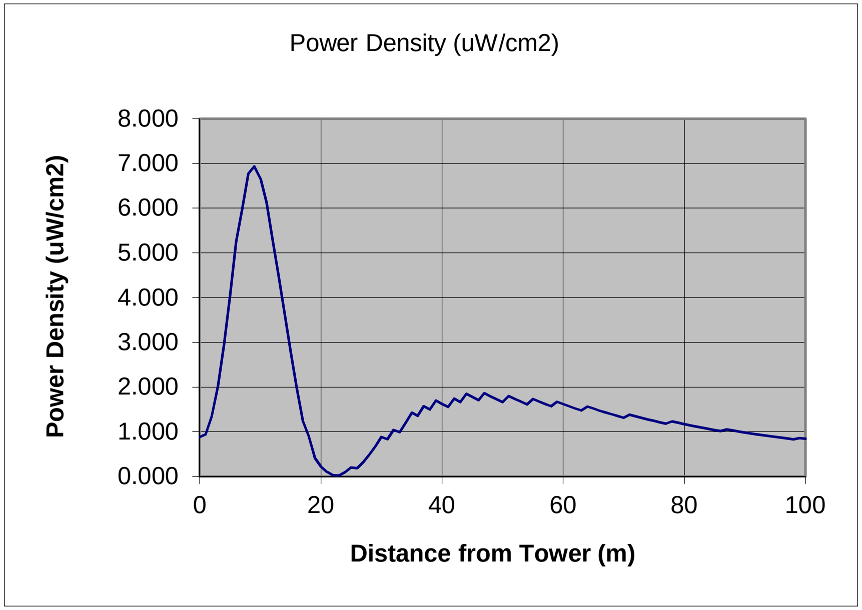
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP	0.3 kW	% of OET-65	
Height above ground	15.0 meters	3.5%	Uncontrolled
Height above head	13.0 meters	0.7%	Controlled
Antenna Brand	**NIC**		
Antenna Model	**BKG-77**		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	13.0	0.122	36.6	0.882
1	86	13.0	0.126	37.8	0.936
2	81	13.2	0.152	45.6	1.338
3	77	13.3	0.189	56.7	2.011
4	73	13.6	0.233	69.9	2.940
5	69	13.9	0.28	84	4.049
6	65	14.3	0.328	98.4	5.258
7	62	14.8	0.361	108.3	5.990
8	58	15.3	0.397	119.1	6.778
9	55	15.8	0.416	124.8	6.936
10	52	16.4	0.423	126.9	6.665
11	50	17.0	0.421	126.3	6.124
12	47	17.7	0.408	122.4	5.329
13	45	18.4	0.39	117	4.509
14	43	19.1	0.365	109.5	3.657
15	41	19.8	0.332	99.6	2.803
16	39	20.6	0.29	87	1.983
17	37	21.4	0.239	71.7	1.250
18	36	22.2	0.211	63.3	0.905
19	34	23.0	0.148	44.4	0.414
20	33	23.9	0.113	33.9	0.225
21	32	24.7	0.077	23.1	0.097
22	31	25.6	0.039	11.7	0.023
23	29	26.4	0.041	12.3	0.024
24	28	27.3	0.083	24.9	0.093
25	27	28.2	0.126	37.8	0.200



26	27	29.1	0.126	37.8	0.188
27	26	30.0	0.17	51	0.322
28	25	30.9	0.215	64.5	0.486
29	24	31.8	0.26	78	0.671
30	23	32.7	0.306	91.8	0.878
31	23	33.6	0.306	91.8	0.830
32	22	34.5	0.352	105.6	1.041
33	22	35.5	0.352	105.6	0.987
34	21	36.4	0.399	119.7	1.204
35	20	37.3	0.445	133.5	1.423
36	20	38.3	0.445	133.5	1.354
37	19	39.2	0.491	147.3	1.571
38	19	40.2	0.491	147.3	1.498
39	18	41.1	0.535	160.5	1.697
40	18	42.1	0.535	160.5	1.621
41	18	43.0	0.535	160.5	1.550
42	17	44.0	0.579	173.7	1.738
43	17	44.9	0.579	173.7	1.665
44	16	45.9	0.623	186.9	1.848
45	16	46.8	0.623	186.9	1.773
46	16	47.8	0.623	186.9	1.702
47	15	48.8	0.665	199.5	1.863
48	15	49.7	0.665	199.5	1.792
49	15	50.7	0.665	199.5	1.724
50	15	51.7	0.665	199.5	1.660
51	14	52.6	0.705	211.5	1.798
52	14	53.6	0.705	211.5	1.733
53	14	54.6	0.705	211.5	1.672
54	14	55.5	0.705	211.5	1.614
55	13	56.5	0.743	222.9	1.732
56	13	57.5	0.743	222.9	1.674
57	13	58.5	0.743	222.9	1.618
58	13	59.4	0.743	222.9	1.566
59	12	60.4	0.78	234	1.670
60	12	61.4	0.78	234	1.617
61	12	62.4	0.78	234	1.567
62	12	63.3	0.78	234	1.519
63	12	64.3	0.78	234	1.473

64	11	65.3	0.815	244.5	1.561
65	11	66.3	0.815	244.5	1.515
66	11	67.3	0.815	244.5	1.471
67	11	68.2	0.815	244.5	1.429
68	11	69.2	0.815	244.5	1.389
69	11	70.2	0.815	244.5	1.350
70	11	71.2	0.815	244.5	1.313
71	10	72.2	0.848	254.4	1.383
72	10	73.2	0.848	254.4	1.346
73	10	74.1	0.848	254.4	1.311
74	10	75.1	0.848	254.4	1.276
75	10	76.1	0.848	254.4	1.244
76	10	77.1	0.848	254.4	1.212
77	10	78.1	0.848	254.4	1.182
78	9	79.1	0.876	262.8	1.230
79	9	80.1	0.876	262.8	1.200
80	9	81.0	0.876	262.8	1.171
81	9	82.0	0.876	262.8	1.143
82	9	83.0	0.876	262.8	1.115
83	9	84.0	0.876	262.8	1.089
84	9	85.0	0.876	262.8	1.064
85	9	86.0	0.876	262.8	1.040
86	9	87.0	0.876	262.8	1.016
87	8	88.0	0.901	270.3	1.051
88	8	89.0	0.901	270.3	1.028
89	8	89.9	0.901	270.3	1.005
90	8	90.9	0.901	270.3	0.984
91	8	91.9	0.901	270.3	0.963
92	8	92.9	0.901	270.3	0.942
93	8	93.9	0.901	270.3	0.922
94	8	94.9	0.901	270.3	0.903
95	8	95.9	0.901	270.3	0.885
96	8	96.9	0.901	270.3	0.867
97	8	97.9	0.901	270.3	0.849
98	8	98.9	0.901	270.3	0.832
99	7	99.8	0.924	277.2	0.858
100	7	100.8	0.924	277.2	0.841